The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 807.---Vol. XXI.] LONDON, SATURDAY, FEBRUARY 8, 1851. [Price 6d.

MINE MATERIALS, IN THE PARISH OF ST. CLEER, CORNWALL.

MR. P. HAMBLY will SELL, BY AUCTION, on Wednesday, 19th Feb., 1851, at CARADON UNITED MINE, in the parish of ST. CLEER, CORNWALL, an excellent STEAM-ENGINE (45-inch cylinder, 8-feet stroke, equal beam), BOILER, and BALANCE-BOB, capstan and shears, horse-whim and puppet-heads, about 75 fathoms capstan rope, about 90 fathoms whim chains, 16 9-inch pumps, 3 10-inch ditto, 9-inch plunger-pole and case, stuffing-boxes, glands, &c., top doorpiece, H-piece and windbore, 1 8-inch 9-feet working barrel, 1 8-inch clack doorpiece, 18-inch 8-feet windbore, about 25 fathoms of 10-inch mainrods, treble and double blocks, and a number of miscellaneous articles, suitable for mining purposes.

The attention of Mine Agents, Farmers, Mechanics, and the public generally, is invited to the above, the materials being of superior quality, and in good condition.

Refreshments on the table at Twelve, and the sale to commence precisely at One.

Dated Old Park, Liskeard, Feb. 1, 1851. 1

ABSOLUTE SALE.—Well secured improved rental of £200 per annum, the property being underlet at £1000 per annum.

MESSRS. FAREBROTHER, CLARK, AND LYE, are instructed by the mortgagees to SELL, BY AUCTION, at Garraway's, on Wednesday, the 26th February, at Twelve o'clock, unless an acceptable offer is previously made by private contract, an IMPROVED RENT OF TWO HUNDRED POUNDS PER ANNUM, for a term of 78 years, from 23d December last past, secured upon the extensive and flourishing Cambrian Copper Works, at Llanelly Flats, in the county of Carmarthen. The property is underleased for the whole term, less 10 days, at £210 per per annum, and held at £10 per annum. The rent now paid by the company is £1000 per annum.

Particulars may be had 21 days prior to the sale, at the Inn at Llanelly, Ivy Bush, Carmarthen; of Messrs. Birchin and Co., solicitors, 46, Parliament-street, Westminster; at Garraway's; and at the offices of Messrs. Farebrother, Clark, and Lye, Lancaster-place, Strand, London. 2

COLLIERY PLANT.

TO BE SOLD, BY AUCTION, on Wednesday, the 5th day of March, 1851, at the POOL COLLIERY, near LLANELLY, Carmarthenshire,—

ONE very excellent PUMPING ENGINE, cylinder 36 inches diameter, and 7 feet stroke, with two boilers, about 20 tons. This engine is quite equal to new, and has very superior condensing apparatus.

ONE HIGH-PRESSURE WINDING ENGINE, cylinder 18 inches diameter, and 3 ft. 6 inches stroke, with two boilers and winding gear, complete.

ONE CONDENSING WINDING ENGINE, cylinder 24 inches diameter, 5 ft. 6 in. stroke, complete to the end of the connecting-rod.

Also, a considerable quantity of pumps, working barrels, plunger poles, capstans and ropes, waggons, trams, tramplates, wrought-iron rails, smiths' tools, lathe, weighing machine, coking ovens, and many other articles belonging to the said colliery.

Further particulars may be had on application to Mr. W. Thomas, Hall-street, Llanelly. 3

ENGINEERS' AND MACHINE-MAKERS' TOOLS, &c., FOR SALE.

1 Large DOUBLE SCREWING MACHINE, to screw bolts and tap nuts, up to 3¼-in. diam.
1 Strong TRIPLE-GEARED SELF-ACTING BORING and TURNING LATHE, 25-inch. centres, 15-feet bed with gap, will take in from 6 to 7 feet diameter, fast head fixed on separate stool, large face plate, compound slide rest, with overhead cone, &c.
1 DOUBLE-GEARED TURNING LATHE, 11-inch centres, with catch plate, intermediate shaft, 2 cones, 1 pair gallowses and grounds.
1 WHEEL CUTTING ENGINE, with 57 change wheels, 110 cutters, varied sizes, 13 arbors, tool with 2 iron and 2 wooden chucks for cutting internal wheels, 1 iron box for cutting racks, 1 large extra slide, and a variety of other articles connected also, 2 intermediate shafts, with 2 cones, 2 pulleys, grooved pulley, slide, gallowses; and grounds.
1 TOOL for making cutters, with widener and arbor.
1 PLANING MACHINE to cut both ways, bed 21 feet long, will take in 21-inch, with extra checks and slide to take in 33-inch, with bar for slotting couplings, 2 tools for fixing on work: also, intermediate shaft, 2 pulleys, 1 drum, gallowses, and grounds.
1 Large DOUBLE-GEARED SELF-ACTING TURNING LATHE, 17-inch centres, 12-feet bed, face plate, catch plate, with intermediate shaft, 2 pulleys, cone, gallowses, and self-acting driving apparatus.
1 Large DOUBLE-GEARED SELF-ACTING TURNING LATHE, 16-inch centres, 19½-feet bed, with apparatus for cutting scrolls, scroll-chuck, 31-inch diameter, face plate, catch plate, stay, 4 tool holders, &c., intermediate shaft, cone, 4 pulleys, gallowses, and self-acting driving apparatus.
1 Large SCREW and NUT, 6 feet long, 3¾-inch diameter, and 1-inch pitch.
2 Small WHEEL CUTTING ENGINES, 1 small vertical drilling machine, vices, hammers, &c.
2 CRANES, 1 triangle, 1 three-wheeled carriage, screw, stocks, with runches, &c.
2 Large GRINDSTONES, in heavy cast-iron boxes, and 1 pair built polishers, with pulleys and frame.
A number of small TURNING LATHES and other tools for bobbin-making; also, a machine for making power-loom drivers.
Large assortment of engine-cut wheel and other patterns—in iron.
Large assortment of machine, tool, and other patterns—in wood.

A considerable number of the above tools and machines are quite new, and but little wrought; the rest have been more or less used, and the whole are of the most approved construction, and in good working order, and are being disposed of at prices considerably below the market value for such articles.

The whole are to be seen on the premises, No. 33, Great Hamilton-street, Glasgow, where, or to Mr. D. M. Carrick, Virginia-buildings, Glasgow, application may be made. 4

WHEAL COURTENAY COPPER MINE, ST. COLUMB, CORNWALL.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, or BY TENDER, the whole UNEXPIRED TERM of the ABOVE VALUABLE SETT, with splendid ENGINE, 50-inch cylinder, nearly new; engine boiler-house, complete, all in first-rate working order, with pumps, capstan and shears, and all other materials applicable for mining purposes.

Copper Ore has been raised of excellent quality during the last few months, but in consequence of a misunderstanding among the present proprietors, this valuable property must be parted with.

Should it be taken up by a company, several of the present shareholders have expressed their desire to take new shares, being so fully satisfied of the value of the sett.

All applications for purchase to be addressed to Mr. E. Brooks, 421, Oxford-street.—Captain Samuel Lowry will show the engine and machinery. 5

TO BE LET, in Lots, for MINING PURPOSES, in NORTH WALES, for a term of 21 years, all that EXTENSIVE RANGE of METALLIFEROUS MOUNTAIN LANDS, part of the ABER HIRNANT ESTATE, within a few miles of the valuable Llangynnog Lead Mines, the lode of which has been traced through the property, which is also intersected by various promising lodes, indicative of LEAD and COPPER—LIMESTONE abounds. The Crown claims have been redeemed.

Apply for particulars to Mr. W. Jones, Lion Hotel, Bala. 6

NOTICE.—The CHIEF PROPRIETORS of the ROCKS AND TREVERBYN UNITED TIN MINES,
GREAT WHEAL BADDERN TIN AND LEAD,
PENDARVES AND ST. AUBYN CONSOLS TIN AND COPPER,—and
UNITY CONSOLS TIN AND COPPER,—in the county of CORNWALL,
Having their OFFICE at No. 51, KING-STREET, MANCHESTER, beg leave to acquaint the Public, that they have

OPENED OFFICES at No. 55, OLD BROAD-STREET, LONDON,

For the purpose of FORMING a METROPOLITAN CONNECTION with SELECT PARTIES, who alone will be received.

For particulars apply to W. W. TERRINGTON, Secretary, No. 55, Old Broad-street, City.—January 30, 1851. 7

ASSAYING AND ANALYSIS.—ASSAYS and ANALYSES of MINERALS, METALS, SOILS, FURNACE, and all other MANUFACTURING PRODUCTS. INVENTORS and INTENDING PATENTEES assisted in PERFECTING any INVENTION involving an intimate knowledge of chemistry.

INSTRUCTION in all branches of ASSAYING, ANALYSIS, and METALLURGICAL and MANUFACTURING CHEMISTRY.

Communications to be addressed to Mr. Mitchell, 23, Hawley-road, Kentish Town. 8

CHEMICAL ANALYSIS, &c.—ANALYSIS and ASSAYS, or INVESTIGATIONS of ANY KIND, are UNDERTAKEN at the COLLEGE OF CHEMISTRY, LIVERPOOL.

Professor—Dr. SHERIDAN MUSPRATT, F.R.S.E.
Hon. Assistant—Mr. JOSEPH DANSON, F.C.S.

A list of Fees for Analysis, and for Students Working in the Laboratory, may be obtained by writing to Dr. Muspratt, College of Chemistry, Liverpool. 9

STIRLING'S PATENT YELLOW METALS—Adapted for SHEATHING, BOLT STAVES, BOLT NAILS, DECK NAILS, as reported on by the late Mr. Owen, Supervisor of Metals to the Admiralty; also for PROPELLERS, FRAMEWORK SCREWS, PISTONS, CYLINDERS, COCKS (particularly where there is exposure to corrosion), RAILWAY CARRIAGE AXLE BEARINGS, and for all machinery subject to friction.

AGENTS.
Messrs. GARDEN & MACANDREW, 34, Dowgate-hill, London.
Messrs. JOHNSON, 166, Buchanan-street, Glasgow.

Applications for licenses and other information to be addressed to the undersigned, at Garden and Macandrew's, No. 34, Dowgate-hill. ALFRED BARRETT, Manager. 10

WIRE ROPE.—The UNDERSIGNED having recently made extensive additions to their Machinery, respectfully solicit a TRIAL of their ROPES, which, in QUALITY of MATERIAL and PERFECTNESS of MANUFACTURE, cannot be surpassed. WILKINS & WEATHERLY.

Patent Wire Rope Works, 39, High-street, Wapping, London.

N.B.—The 3½ miles of wire rope in the Wapping Tunnel, at Liverpool, was supplied from this establishment. 11

MR. JAMES CROFTS, of 4, KING-STREET, CHEAPSIDE, MINING BROKER, in renewing OFFERS of SERVICE to CAPITALISTS, feels much gratified at the extent of patronage and confidence he has received hitherto, and will continue so to treat the interests of his friends in town and country as to deserve a still more important share of their orders, whether for PURCHASING or SELLING MINING SHARES.—Mr. CROFTS acts exclusively for PRINCIPALS, and will cheerfully give advice on contemplated investments, so far as his knowledge or judgment permits, either personally or by letter.

Numerous sound concerns may be safely invested in, exclusive of *dividend mines*, but the latter with a certainty, *for some years*, of 12½ to 15 per cent. per annum interest.

Mr. Crofts has specially for Sale—

Tincroft (20 shares)	Lewis (10 shares)
South Tamar (40 shares)	Wellington (10 shares)
East Tamar (20 shares)	East Tolgus (5 shares)
Nap Down Consols	Wheal Tremar (60 shares)
Warleggan Consols (20 shares)	Wheal Vincent (30 shares)
Snowdon (40 shares)	Heigraton Down (20 shares)
Wheal Sophia (5 shares)	Wheal Trescoll (10 shares)
Alfred Consols	Bedford United (15 shares)
South Tolgus	West Wheal Virgin (6 shares)
Polgear and Nancarrow	Wheal Hennock (20 shares)
Wheal Harriet (21 shares)	

Mr. Crofts issues a Price Current of Mining Shares twice each week, which may be had on application.—Dated 4, King-street, Cheapside, Feb. 7, 1851. 12

MESSRS. FRANCIS & LIGHTOLLER, MINING AGENTS AND CIVIL ENGINEERS.

OFFICE,—No. 34, EXCHANGE ARCADE, MANCHESTER.

Messrs. FRANCIS and LIGHTOLLER, may be CONSULTED by MINING COMPANIES or OTHER PARTIES requiring INSPECTIONS and REPORTS on MINES of every description, or by CAPITALISTS and OTHERS desirous of INVESTING their CAPITAL in MINES or other MINERAL PROPERTIES.

Statistics and other general information connected with Mines and the Mineral Districts given or obtained with the utmost dispatch.

Capt. Absalom Francis having had upwards of 30 years' experience in the practical management of mines, and reported on most of the principal ones in the United Kingdom, applicants may rest assured they will receive full and satisfactory information on matters connected with mining.

Arbitrators and contractors for the erection of every description of mining machinery. 13

MINING SPECULATIONS.—Mr. EVAN HOPKINS, C.E., F.G.S., &c., CONSULTING MINING ENGINEER—Office, 13, AUSTINFRIARS, LONDON.—Mr. HOPKINS may be consulted daily by Noblemen, Gentlemen, and Capitalists, who have INVESTED, or may wish to INVEST, their CAPITAL in MINES or MINERAL PROPERTY, both Home and Foreign. This office is the only one of the kind in the kingdom, having no dealings in shares—is independent, and unconnected with any party, besides possessing a thorough knowledge of Mining in all its branches, practically as well as theoretically, considered as a matter of business, from many years' experience. To avoid the abuses which are daily occurring, at the expense of distant capitalists and the uninitiated, it is particularly requested that no notice be taken of any verbal representations respecting the prospects of mines, without being duly authenticated by a qualified and disinterested person, whose character for judgment and integrity is founded on past transactions in mining. The object of this office is to protect legitimate mining, to see justice done to the capitalists and property, and to make the necessary examinations in time, not only to ensure that the prospects held out are well founded, but also that the concerns are in the hands of regular men of business—without which no mine, however good it may be, can be rendered remunerative to distant proprietors.

*** *All communications to be strictly confidential.* 14

CONSULTING AND ADVISING MINE AGENCY, *OFFICES,—No. 11, ADAM-STREET, ADELPHI.*

Science and Experience have done much for Home Mining: a new era has commenced for that important branch of British Industry and Enterprize. It no longer ranks at the head of the *hazardous* undertakings of the day, but has become an enlarged and truly National Interest, and an inviting and profitable field for the INVESTMENT of CAPITAL. Guided by knowledge, discretion, and honourable management, there is no field more profitable than Home Mining.

The DESIGN of the Promoters and Managers of this CONSULTING AND ADVISING MINE AGENCY is—to organise a system for securing the BEST ADVICE of the science and experience of the day:—to provide INFORMATION on the true state of MINING OPERATIONS GENERALLY, or in any PARTICULAR QUARTER DESIRED;—and to ASCERTAIN, as far as practicable, the TRUE VALUE of MINING SETTS, on the application of individuals or of companies.

With Connections extending into all the Mining Districts of the United Kingdom and Ireland, and aided by the experienced judgment of eminent Geologists, from whom special reports may be obtained, when required, the means and resources at command are of a character to justify the fullest confidence.

Apply, personally or by letter, to GEORGE I. SOPER. 15

MR. JAMES STRIDE, formerly of the firm of Bulmer & Stride, Parliamentary Agents, and late of Spring Gardens, MINING SHARE DEALER and AGENT, begs to state that he now TRANSACTS MINING BUSINESS at the *JAMAICA COFFEE-HOUSE, CORNHILL, LONDON.*

Considering the improving value of Mining Property, and the consequent increasing demand for Shares, Mr. Stride deems the present time favourable for offering his advice in respect to that description of property. 16

CALLINGTON MINES COMPANY.—At a Quarterly General Meeting of shareholders, held this day, it was resolved,—1. That the reports and accounts now submitted be received, adopted, and entered in the Company's cost and transfer-book.—Carried unanimously.—2. That the thanks of this meeting be given to the directors and Mr. P. N. Johnson, for their services.—Carried unanimously.

Salvador-house, London, Jan. 29, 1851. 17

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a DIVIDEND of THREE POUNDS per share will be PAID to the holders of Certificates in this Company, at the office of the Association, 26, Austinfriars, on and after Tuesday, the 25th day of February inst., between the hours of Eleven and Three o'clock. The proprietors are requested to leave their Certificates at the office, for examination, three clear days before the day of payment.

By order of the Court of Directors.
26, Austinfriars, Feb. 7, 1851. WM. LECKIE, Secretary. 18

UNITED MINES, TAVISTOCK.—At a MEETING of the adventurers in the UNITED MINES, Tavistock, held at the Purser's office, No. 7, Athenæum-terrace, Plymouth, on Thursday, the 6th February, 1851, at noon,

JOHN BAYLY, Esq., in the chair,

The Purser having requested that a committee might be appointed to consider the rules before they are finally settled, and also the plans for future workings, before those works are definitely agreed on, and also to determine on the arrangement with the lords of the soil, &c.—

Resolved,—That Dr. Yonge, and Messrs. Bayly, Pridham, and Mare, be such committee, with power to call in such assistance as they may deem desirable.

The verbal reports of the committee were deemed in the highest degree satisfactory.

Resolved,—That this meeting be adjourned to Thursday next, the 13th inst.

JOHN BAYLY, Chairman. 19

NAP DOWN CONSOLS SILVER-LEAD MINING COMPANY,—COMBMARTIN, NORTH DEVON.

OFFICES—No. 80, THREADNEEDLE-STREET, LONDON.

In 6000 shares, of £1 each.

CONDUCTED ON THE COST-BOOK SYSTEM.

Bankers—Messrs. Masterman and Co., Lombard-street, London; and the National Provincial Bank of England, Barnstaple.

Secretary—Mr. James Lane, No. 37, Threadneedle-street.

Applications for shares to be made to Mr. Thos. Allsop, stock and sharebroker, No. 1, Royal Exchange-buildings, London; Mr. James Lane, secretary, at the offices of the Company; and William Thorne, Esq., Barnstaple, Devon; or of the following brokers:—J. Davies, 38, Tower-buildings, Liverpool; E. Speakman, Exchange-chambers, Manchester; C. Boardshaw, Leeds; J. Ironside, Sheffield; Messrs. T. W. Flint and Co., Hull; G. Trickett, Post-office Chambers, Plymouth—to whom all communications may be addressed, and of whom prospectuses and plans may be obtained.

Prospectuses may also be had at the office of the *Mining Journal*, 26, Fleet-street.

NO FURTHER APPLICATIONS for SHARES can be RECEIVED after MONDAY, the 17th inst., when the Allotment will be proceeded with.

In consequence of the numerous applications for shares, and in deference to the general feeling in favour of raising all the estimated capital in the first instance, rather than by successive calls, it has been determined to issue 6000 shares, of £1 each, fully paid, in place of 3000 shares, of £2 each, as originally intended. 20

UNDER BRITISH AND FOREIGN LETTERS PATENT.

HUTCHISONISED STONE, BRICKS, &c.—TO LAND PROPRIETORS, ENGINEERS, ARCHITECTS, &c.—The SOFTEST STONE, CHALK, GYPSUM, CLAY, SAND, &c., INDURATED AS HARD AS GRANITE—will never vegetate nor disintegrate, being impervious to atmospheric action, &c.

For all Foundations, external and internal Buildings, Docks and Sea Walls, Sewerage, Paving, Decorative and Monumental Works, the HUTCHISONISED MATERIALS are unequalled for durability and low cost.—(*See Testimonials and Prices.*)

PASTEBOARD, SOFT WOOD, and other ABSORBENT MATERIALS, rendered WATERPROOF, and imperishable from weather, vermin, &c.

LICENSES GRANTED ON LIBERAL TERMS.

Apply to Wm. HUTCHISON, Hutchisonised Stone Works, &c., Tunbridge Wells, Kent. 21

WANTED,—By an experienced Person, who has resided several years in Spain, a SITUATION as CLERK, or as CLERK and DIALLER, in any MINES ABROAD. The Advertiser is well acquainted with the Spanish language, and has a thorough knowledge of his profession and accounts: would have no objection to making himself generally useful. Most unexceptional references given.

Address (pre-paid) to "A. Z. M.," *Mining Journal* Office, 26, Fleet-street, London. 22

WANTED,—An experienced MINING AGENT, to take the entire MANAGEMENT of a COPPER MINE in NORTH DEVON: he must be a good Dialler, and also practically acquainted with Mining Accounts. Salary Eight Guineas per month.—Address, with testimonials of ability and integrity, to Mr. T. P. Thomas, 3, George-yard, Lombard-street. 23

WANTED,—For the COBRE MINES, an experienced PITMAN.—Apply to Captain James Reynolds, Redruth, Cornwall; or at the office of the Company, 26, Austinfriars, London. 24

TO CAPITALISTS.—TO BE LET, a valuable FIELD of COAL, within a short distance of the SWANSEA CANAL.—The two Upper Veins, which crop up upon the estate, have been won and worked for some time.

For further particulars apply to Evan Hopkins, Esq., C.E., 13, Austinfriars, London. 25

TO PLUMBERS, TIN-PLATE MANUFACTURERS, &c.—SHARES of a VALUABLE PATENT, connected with, and important to, Persons engaged in these and other analogous branches of business, to BE DISPOSED OF.

Address "S. D. M." at the office of the *Mining Journal*, 26, Fleet-street, London. 26

CHARCOAL IRON.—By a recent INVENTION, this IRON can BE MADE in ENGLAND 25 per cent. below present prices. The proprietor offers a PART FOR SALE, to obtain capital to carry it out. Patents and proofs will be forwarded by him.—Address (post-paid) to Mr. Williams, Director of Mines, Philippeville, province of Namur, Belgium. 27

COLLIERY INVESTMENT.—A PARTY having SIX THOUSAND POUNDS to INVEST, has an opportunity of doing so, in the PURCHASE of a SHARE of an extensive and valuable COLLIERY and PLANT in MONMOUTHSHIRE, with a guarantee of 10 per cent. upon his Capital, and a liberal Share of the Surplus Profits. All the Bituminous Coal Measures of the South Wales Coal Basin are in the property.—Address Messrs. Tyson, Curling, and Hope, solicitors, Frederick-place, Old Jewry, London. 28

VALUABLE SLATE QUARRY TO BE DISPOSED OF, on the north coast of CORNWALL, on the Cliffs, and containing a large supply of very excellent SLATE, with shipping for the same close by. A term of 21 years is offered in the above-named Quarry, on such conditions as may be known by applying to Mr. W. D. King, solicitor, Camelford. 29

SALE OF LEAD ORE, BY TENDER.—A PARCEL of about 2067 cwts. LEAD ORE, lying at the IMPERIAL MINES, at MIES, in BOHEMIA, is TO BE SOLD by the Imperial authorities to the highest bidder.

Persons desirous of becoming buyers are requested to make a tender in writing, which must be delivered before noon on the 1st of March, 1851, at the Imperial Mining Office, Przibram, in Bohemia.

The conditions and terms upon which the above Lead Ore will be sold, may be learned by applying to Messrs. August Faber and Co., 60, Mark-lane, London. 30

FOR SALE, in One Lot, a fine COLLECTION of MINERALS, consisting of about ONE THOUSAND EIGHT HUNDRED SPECIMENS, in two Cabinets—arranged and catalogued. The Collection is particularly rich in METALLIC SPECIMENS. It is to be seen at the house of the proprietor, Wm. E. Collins Wood, Esq., Keitheck House, near Cupar Angus, Scotland.—For particulars apply to Mr. Alex. Ross, mineral surveyor, 1, Drummond-street, Edinburgh. 31

STIRLING'S PATENT ALLOYS.—RAILWAY CARRIAGE BEARINGS, MILL BRASSES, and all DESCRIPTIONS of CASTINGS, are MANUFACTURED by ALFRED BARRETT, Bishopsgate Foundry, Skinner-street,

SOLE LICENSEE FOR LONDON.

BELLS of very superior quality (Stirling's Patent) are also SUPPLIED. 32

REGISTRY FOR THE SALE AND PURCHASE OF MINING SHARES.—DURRANT and CO., MINING SHAREBROKERS and DEALERS, No. 58, LOMBARD-STREET, LONDON, beg to draw the attention of Capitalists to their REGISTRY for the SALE and PURCHASE OF SHARES.

Shares for Disposal.—Devon Great Consols (1), West Caradon (2), Wheal Mary Ann (2), Trelawny (1), Wheal Trescoll (5), Wheal Seton, Trevisky, South Tolgus, Trethevy (10), Wellingtons (6). N.B.—Statistical information furnished on British and Foreign Mines.—No Charge made for the registration of shares unless business be transacted. 33

RAILWAY AND MINING OFFICES, No. 3, CASTLE-TERRACE, EXETER.—Mr. JOHN JURY, RAILWAY and MINING SHAREBROKER, OFFERS his SERVICES to CAPITALISTS in the PURCHASE or SALE of ANY DESCRIPTION OF PROPERTY; and will be happy to point out a selection of such stock as appear the most eligible, from data that can only be arrived at by those who give an undivided attention to the subject.—Every information afforded (either in person or by letter) to capitalists wishing to invest or exchange their securities, and sales or purchases effected upon the best terms, and at one-half the commission usually charged. 34

MINING SHARES.—Mr. HENRY VATCHER, EXETER, OFFERS his ADVICE and ASSISTANCE to PARTIES willing to INVEST in the ABOVE SECURITIES. Ten years' residence in Exeter, together with periodical visits to nearly all the Mines in Devon and Cornwall, enables him to become thoroughly acquainted with their respective merits.—Mr. VATCHER has at his command, at all times, practical and experienced agents, so that if any inspection is required, the same can be done without delay. 35

MR. BELL WILLIAMS, MINE BROKER and VIEWER, 16, *CASTLE-STREET, LIVERPOOL.* 36

MR. JOHN DAVIES, MINING SHAREBROKER, *No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.* 37

MESSRS. BOXALL & CO., MINING SHARE DEALERS, 5, *CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.* 38

MR. W. BIRDSEY, MINING AGENT, begs to acquaint his Friends and the Public, that he has OFFICES at No. 1, ST. MICHAEL'S-ALLEY, CORNHILL, and takes this opportunity to thank them for the favours he has hitherto received. From an extensive experience in MINING PROPERTY, in which he has been engaged upwards of 20 years, Mr. Birdsey flatters himself he will be enabled to give much general information—he having personally visited most of the mines in Cornwall.—Mr. BIRDSEY trusts, by strict attention to the interests of those who may honour him with their confidence, to merit a continuance of their orders. 39

MINING OFFICES,—48, THREADNEEDLE-STREET, LONDON.—Messrs. THOS. FULLER & CO., beg respectfully to call the attention of CAPITALISTS to MINING, as being the most SAFE and PROFITABLE MEDIUM of INVESTMENT, and are in a position to BUY and SELL in all the DIVIDEND-PAYING MINES, and have on hand several other Mines, which will insure to capitalists the most safe investment, and will pay from 15 to 30 per cent. 40

MINING AGENCY.—The SUBSCRIBERS respectfully intimate, that their old and extensive CONNECTIONS afford them peculiar FACILITIES for EFFECTING SALES or PURCHASES of MINING SHARES with the utmost promptitude, and upon the best possible terms. They also beg it to be distinctly understood, that considering it to be incompatible with their duties as agents to speculate upon their own account, they have determined to adhere exclusively to a legitimate commission business. Established 1839. JAMES S. TRIPP & CO.

Lombard-street Chambers, No. 33, Clement's-lane, City. 41

MINING OFFICES, ST. MICHAEL'S CHAMBERS, *ST. MICHAEL'S ALLEY, CORNHILL, LONDON.*

Mr. R. TRIPP, MINING AGENT, has FOR SALE SHARES in most of the best DIVIDEND-PAYING MINES—including Devon Consols, South Caradon, North Pool, Caradon, Wheal Mary Ann, Botallack, Wheal Margaret, Bedford United, Alfred Consols, Wheal Tremayne, Wellington Consols, &c. Also in new ones, having present and prospective advantages; and is a PURCHASER of Treviskey and Barrier, Trelawny, Wheal Carpenter, Wheal Crebor, &c. &c. 42

MINING SHARES.—Mr. JOHN CREFT, No. 1, ROYAL EXCHANGE-BUILDINGS, LONDON, OFFERS his SERVICES, ON COMMISSION, to BUY and SELL MINING SHARES, and will select for capitalists those with the greatest chance of success, and take pleasure in furnishing a list of prices, together with all particulars. 43

MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock. 44

MESSRS. TREVARTON AND CO., MINING SHARE DEALERS AND BROKERS,
5, *ST. JAMES'S-STREET, PALL-MALL, LONDON.*

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY	Royal Botanic—Inner Circle, Regent's-park	3½ P.M.
MONDAY	Geographical—3, Waterloo-place	8½ P.M.
	British Architects—16, Grosvenor-street	8 P.M.
TUESDAY	Medical and Chirurgical—53, Berners-street	8½ P.M.
	Civil Engineers—25, Great George-street	8 P.M.
	Zoological—11, Hanover-square	9 P.M.
	Syro-Egyptian—71, Mortimer-street, Cavendish-square	7½ P.M.
WEDNESDAY	Society of Arts—Adelphi	8 P.M.
	London Institution—Finsbury-circus	7 P.M.
	Graphic—Thatched-house Tavern	8 P.M.
	Microscopical—21, Regent-street	7 P.M.
	Pharmaceutical—17, Bloomsbury-square	9 P.M.
	Ethnological—17, Saville-row	8 P.M.
	Literary Fund—73, Great Russell-street	3 P.M.
THURSDAY	Royal—Somerset-house	8½ P.M.
	Antiquaries—Somerset-house	8 P.M.
	Royal Society of Literature—4, St. Martin's-place	4 P.M.
FRIDAY	Astronomical—Somerset-house	3 P.M.
	Royal Institution—Albemarle-street	8½ P.M.
SATURDAY	Asiatic—5, New Burlington-street	2 P.M.
	Medical—33, George-street, Hanover-square	8 P.M.

ROYAL INSTITUTION.

January 24.—Sir R. I. MURCHISON (Vice-President) in the chair.

"On the Magnetic Characters and Relations of Oxygen and Nitrogen," by Prof. FARADAY.—In a Friday evening discourse on the diamagnetic condition of flame and gases, delivered on the 14th April, 1848, Prof. Faraday called attention to the singular condition of oxygen gas in its relation to the magnet. It was then demonstrated that this gas was magnetic, by its carrying a cloud of muriate of ammonia (itself diamagnetic) to the poles of the magnet, around which it seemed to gyrate in vortices. A more elaborate paper on the same subject had previously appeared in the *Phil. Mag.* for Dec. 1847. Last year, M. Becquerel, not aware of these researches, had re-discovered the high magnetic character of oxygen, made some independent investigations, and derived numerical results from them. These inquiries Prof. Faraday does not consider to interfere with, but strongly to confirm, his own. Oxygen is one of the most remarkable of known bodies: it forms one-half of the aggregate of all matter. Important as are its magnetic properties, it seems incapable of receiving permanent magnetism, like steel or the natural loadstone. By a series of elementary experiments, the audience were led to discriminate between these bodies, and soft iron, nickel, cobalt; which, unless while under an extraneous magnetic influence, have no attractive force. Oxygen being of the latter class, it is not certain that, even while it possesses an attractive power, it is in the exact condition of the permanently magnetical body from which it derives it. Were oxygen highly magnetic in the same extent as iron is, the immense quantity of magnetic power which would in that case be constantly undergoing variation, by combustion, respiration, &c., would cause the most serious disturbances in nature. It is necessary to the conservation of the present state of things that the magnetic power in a given bulk of oxygen should be comparatively small. The audience were, therefore, told to expect no great demonstration of magnetism; but the extent to which that power does exist in oxygen and air was proved by various experiments. The inference from these is—that as oxygen enters into the atmosphere in a constant proportion, and as the magnetic power of oxygen varies directly with its density, definite variation must take place in the magnetic power of the atmosphere in different states.—In conclusion, Prof. Faraday announced his intention of applying, on a future evening, the reasoning deducible from these and other experiments to the variation of magnetic lines on the earth's surface. His purpose then will be to compare the records of this varying force with the variations of temperature occasioned by the annual revolution of the earth, the varying pressure of the atmosphere, storms, &c., with the hope of supplying a true theory of the cause of the annual and diurnal, and many of the irregular variations of the terrestrial magnetic powers.

INSTITUTION OF CIVIL ENGINEERS.

FEBRUARY 4.—WILLIAM CUBITT, Esq. (president), in the chair.

The paper read was "an Inquiry into the nature of Patent Law protection, with a view to the better appreciation and security of the Rights of Inventors," by Mr. A. V. Newton.

A model of a self-acting siding stop for railways, designed by Mr. C. Hutton Gregory, M. Inst. C.E., was exhibited and explained. The stop consisted of a block of wood shod with iron, and either turning or falling across the rail. A counter weight retained it when down in the iron chairs on each side of the rail, and being connected with the switch by a wire-rope and two bell cranks, both must be moved simultaneously. When the switch was set for the main line, the counter weight kept the stop on the rail, and closed the siding, but when the switch was set for the siding, the weight was drawn up, and the block turned over, so as to leave the rail clear, thus leaving the siding uninterrupted. It was explained that by the same arrangement a block might be made to move sideways, or to slide transversely across the rail. The use of this stop involved no extra labour, as it was worked simultaneously with the switch: it was very cheap and simple in its construction, not costing more than 3*l.*, and was not liable to derangement. It had been made for the Bristol and Exeter Railway, by Mr. Hennett, of Bridgewater, and was found to act well in practice.

At the monthly ballot the following candidates were duly elected:—Messrs. W. Hartree, J. D. Rigby, and T. Waterman, as associates.

NEW METHOD OF OBTAINING ELABORATE METALLIC CASTINGS.—The most intricate and curious castings we are acquainted with are those obtained in moulds from Nature's own works, by imbedding a leaf, plant, &c., in a semi-fluid medium, which when hardened can be dried and raised to a temperature to burn the enclosed object to ashes. But if it were desired to produce, as a casting, a wreath, boquet, group of animals, birds, flowers, fruits, &c., the artist would be obliged either to abandon the task, or to proceed by a very tedious process to obtain as many separate moulds as there were involved parts in the object to be cast. He would never attempt one model, one mould, and one casting. Now, when engaged on the Durertype, although I was then employing only flat surfaces, a very slight occurrence in the course of experiments which I was then engaged with led me to discover a simple, economical method for obtaining works of art in metals, however elaborate or delicate, provided they had the two indispensable requisites for obtaining castings at all—continuity of parts, and sufficient thickness for metal to run. In the Durertype I employed a layer of wax on sheet-glass; the wax was engraved, and a plaster of Paris cast was made of the engraved wax. On slightly warming the glass, the plaster and wax left its surface together, presenting a perfectly uniform appearance; and, for a moment, I was perplexed how to remove the wax. A good fire being in the room, I placed the plaster before it, and the wax sunk into the plaster, like snow into the earth before the sun—leaving the now engraved plaster quite sharp, pure, and unsullied, having no waxed or oily appearance whatever, even where the wax was fully one-sixteenth of an inch thick. Following out the idea which this circumstance suggested, I saw at once that it was only requisite to model any figure in sheet wax, and surround it with plaster of Paris, or other sufficiently plastic and hardening mould, to produce all that would be requisite for casting, in almost any metal, any subject whatever, direct from the hand of the artist. The plan which I proceed on is this:—Sheets of wax are cut and formed into any required shape, as usual in making wax flowers, &c., or, in some cases, wax, or a substitute consisting of stearine and resin, may be moulded or shaped to any particular form; and when the whole is arranged and put together, set up on a board covered with wax, I next take waxed threads to form air vents, by attaching one end of a thread to the wax foundation, and the other to the loftiest point in the object, most suitable for this purpose—proceeding to do the same with other points requiring the same attention—bearing in mind that the plaster mould will have to be turned upside down, and that when dry and warm from a suitable drying oven, the lower ends of all these threads will be uppermost, and can be withdrawn, having shrunk from the loss of wax, which substance will also have been absorbed by every part of the mould, or, where thick and in quantity, may in part be run out. As this means of casting will be of utility only in the hands of practical workmen in metals, I do not go into the matter here more minutely. One mode, but a troublesome one, of obtaining such a class of moulds, already known—by burning out the object, as at first stated—presents some difficulties, affords little choice, and is of very limited application; whereas I should hope that the improvement here suggested will be found generally useful in producing a variety of highly ornamental work of a character hitherto unknown. By using stearine and resin, with perhaps a little Burgundy pitch, a cheap substitute for wax is obtained. In forming wreaths, &c., as no colouring is required, the artist has only to attend to form, dimensions, and general arrangement,—unlike the artificial florist in wax work, who must study every shade of colour. This process, too, has many advantages over electro-typing; and may extend that art to coat with the precious metals castings in copper, &c., obtained by the present suggested improvement. Indeed, I trust these hints will not be too late to enable all who are interested in ornamental casting to add some improvement, by this method, to such works as they may be intending for the Great Exhibition of the present year.—HENRY DIRCKS: *Athenæum.*

HOLLOWAY'S OINTMENT AND PILLS AGAIN SUCCESSFUL IN THE CURE OF A BAD LEG.—Extract of a letter from Mr. Brotherton, of Stangrat, near Bootle:—Jan. 15th, 1851.—To Professor Holloway.—Sir,—After my wife's confinement in 1848, she caught a severe cold, which settled in her right leg and foot, causing it to swell to an alarming size, ultimately forming into about 20 wounds, presenting a most fearful appearance. The pain she endured was almost insupportable, and the treatment of her medical attendants did no good whatever. She, therefore, resolved to give your pills and ointment a trial, and I am happy to say they have effected a perfect cure.—Sold by all druggists, and at Professor Holloway's Establishment, 224, Strand, London.

METALLIC COMPOUNDS.—Mr. W. H. Gossage, chemist, Stoke Prior, Worcester, has patented some improvements in obtaining certain metals from some compounds containing such metals, and in obtaining other products by the use of certain compounds containing metals. The nature of this invention will be understood from the claims, which are—1. Obtaining copper and silver, or one of these metals, also sulphate of soda and hydrochloric acid, by the use of the material designated "burnt pyrites," firstly, by fluxing this material with alkali waste, so as to obtain metals in a state of regulus, which is used for decomposing common salt, and thereby obtaining sulphate of soda and hydrochloric acid, at the same time that the copper and silver, when contained in such regulus, are brought to a state capable of solution by water, from which solution these metals, or one of them, can be precipitated in a metallic state, or in the state of oxides and chlorides, which can be easily reduced to the metallic state by many known means; secondly, by mixing such burnt pyrites with common salt and small coal, and subjecting the mixture to the action of sulphurous acid gas, thereby obtaining sulphate of soda and hydrochloric acid at the same time that the copper and silver, when contained in such burnt pyrites, are brought to a state capable of solution by water, from which solution these metals, or one of them, can be precipitated in a metallic state, or in the state of oxides or chlorides, which may be afterwards reduced to the metallic state.—2. Obtaining sulphate of soda and hydrochloric acid from native pyrites, burnt pyrites, and small coal, by making this mixture into balls, which are burnt in kilns, and sulphate of soda and hydrochloric acid produced, at the same time that the copper and silver are brought to a state capable of solution by water, from which solution these metals, or one of them, can be precipitated in a metallic state, or in the state of oxides or chlorides, which may be afterwards reduced to the metallic state.—3. Obtaining sulphate of soda and silver from the regulus of copper and of iron containing silver, by mixing the regulus with common salt and small coal, and making this mixture into balls, which are burnt in kilns, thereby obtaining sulphate of soda, oxide of iron, and a portion of the silver in a soluble state; also extracting the remaining portion of the silver by subjecting the residuum (after lixiviation) to heat, in mixture with coal, thereby converting the oxide of iron to a metallic state, the metallic iron thus obtained being subsequently caused to decompose galena; or, extracting the remaining portion of the silver by subjecting the residuum (after lixiviation) to the action of hydrochloric acid, by which the silver will be obtained in a state of solution, from which solution it may be precipitated in a metallic state, or in the state of oxide or chloride, which can be reduced to the metallic state

Mr. Wilson, of Dundyvan, has recently become sole proprietor of the Muirkirk Iron-works; and, besides owning the extensive new works at Lugar, he has entirely in his hands the large concerns at Dundyvan, and Kinneil. Mr. Wilson is now the most extensive ironmaster in Scotland: he is the owner of no fewer than 20 furnaces—Dundyvan nine, Kinneil four, Lugar five, and Muirkirk two. Besides pig-iron, he is also a very extensive maker of malleable iron, for which he has works at Dundyvan, which in magnitude almost rival the immense Carron works.

BLEACHING LIQUIDS, AND DEODORATORS.—Many of the "bleaching liquids," so called and recommended for washing household linen, &c., are highly injurious to the fabric, decomposing the fibre, and rotting them in a comparatively short time. We have received a sample bottle of a new compound for this purpose, just brought before the public by Messrs. Bradfield and Co., of Princes-street, Leicester-square, which, after many experiments by the inventor, is found to possess numerous advantages, which may be obtained by using it in the following proportions:—For cleansing floors, deal tables, shelves, &c., half a pint in a pail of water will, after a few times using, have a marked effect in bleaching them; and in bed rooms, places where large numbers of persons congregate, and confined situations, washing or sprinkling will purify the atmosphere, and decompose fœtid vapours. It is a good plan to wipe the boards over with the solution after every time of scrubbing in the usual manner. It purifies the atmosphere, besides giving a brilliantly white appearance. For linen, calico, &c., after the usual washing, the articles should lay in the solution for an hour, then wrung, and well rinsed. We have seen the result of such an operation on an old dirty piece of calico; after washing, it was divided, one-half being dried as it was, the other soaked an hour in the liquid. when the difference was remarkable. It is a solution in which the highly-valued properties of chlorine is retained as a decomposer; while the inventor pledges himself that not an atom of lime is in it: thus it is free from the disadvantages of chloride of lime, while it possesses all the bleaching properties of the pure element, without being destructive to textile fabrics, and it will be found generally highly conducive to health, in dwellings and other establishments where it is employed.

VACUUM GAUGE FOR CONDENSING ENGINES.—At the meeting of the Institution of Mechanical Engineers, Mr. F. Bramwell (after referring to the long and short vacuum gauges) described an improved gauge, the difference being merely in the arrangement. Instead of immersing the whole of the tube and scale in a glass chamber connected with the condenser, the bulb only was enclosed in a brass cup with a screw lid (in which the scale was cast), and the rest of the mercurial tube was passed through a stuffing box in the middle of this lid, protecting it from injury by sinking it in a depression in the scale, like a common thermometer. On the bottom of the brass cup was the stop-cock with the pipe, by which connection was made with the condenser; the same density was always preserved in it and the cup, and thus, the pressure being removed from the surface of the mercury in the bulb, it of course fell according to the rarefaction, a fall that could be always observed, as the tube containing the mercury was totally uncovered. By this means the first and great objection to the short vacuum gauge was done away, and likewise the second, which was common to both long and short—viz.: the risk of the stop-cock being left open while blowing through, as with this gauge it was a matter of perfect indifference whether it was open or not, as the only thing that took place in such a case was that the brass closed cup was filled with steam, but this could neither blow out the mercury nor damage the gauge.—Mr. Cowper remarked that the plan was not new, as he had used it for a considerable time. He believed that Mr. Field, of Birmingham, had some claim to the merit of this invention.—*Birmingham Journal.*

STEAM EXPLODED!—The *Germantown Telegraph* (Pennsylvania) says, there has been just brought to light the application of a power which is to supersede entirely the present steam-power of the world. The discovery has been made by an Eastern man, who has completed his models—one of which will be deposited at Washington as soon as the patent rights shall be secured in the different European countries. The machinery is entirely perfected—the power is a motive one, and steam has no part in creating it. So simple and economical are the principle and application, that two tons of coal will be sufficient to drive the largest ship of the line around the world! The *Telegraph* is quite enthusiastic in its predictions.

CALIFORNIA.—The steamships *Cherokee* and *Prometheus* have arrived at New York with about two millions of gold and gold dust. California papers contain most glowing accounts from the mining districts; and it is stated that the mining business had been carried on during the past three or four months with more energy and perseverance than ever, and that the product has been very great. It appears by official returns made up at San Francisco, that from Sept. 1, 1849, to Dec. 13, 1850, $31,060,155 in gold and gold dust were shipped from that port; it is estimated that between 20 and $30,000,000 have been carried away in the baggage and pockets of passengers. It would not be far out of the way to estimate the amount of gold carried away from California, from June, 1848 (when the discovery of gold was made), to Sept., 1849, at $10,000,000. It therefore appears, by these statements, that about $70,000,000, in gold, have been exported from California from June, 1848, to Dec. 13, 1850—a period of two years and six months. As large as this is in the aggregate, the annual shipments have been much less than anticipated. The average is $28,000,000 a year.—The *New York Herald* says,—"It is our impression that the product per head has reached its maximum, whatever it was; and that from this time forward the inducements for digging will steadily decrease: another year will tell the whole story."

The *Pacific News* of 14th Dec. says,—"In addition to our gold placers, California is likely to prove rich in silver ore. We have heretofore had occasion to notice the discovery of two or three no very inconsiderable mines: another has been discovered a few leagues from Monterey, which promises to be exceedingly rich. Portions of the ore have been taken out and assayed, and worked up for use. A company is now forming at Monterey for the purpose of working the mine upon an extensive scale, and the stockholders are are confident that it will prove a good investment."

Lead mines have also been discovered: the *Sacramento Transcript* says—"We have been informed that a large mine of lead, in an almost pure state, exists about 11 miles above Johnson's ranche: it was discovered by two Irish emigrants, who had wandered from the road several miles, in pursuit of stock. They at once supposed it to be a silver mine, and that their fortunes were 'done made.' They brought a large quantity to Mr. Johnson's ranche; it was examined and found to be very rich lead ore, containing probably 95 per cent. of lead. Vast quantities could readily be obtained without the sinking of a shaft or the driving of a level, since the ore is represented to lie upon the surface of the earth in large boulders."

From the Mariposa district, we learn that the mine upon Col. Fremont's land is yielding a rich return for the capital and labour bestowed upon it. A town has grown up where but a few tents were formerly to be seen, with some excellent cottages, one belonging to the Colonel himself.

From Oregon, we learn that the gold fever had broken out again; it was caused by glowing accounts from the Klamath, where gold had been taken out in $1000 lumps, from that down to $8 lumps; all the gold is found in larger lumps than the richest gold mines of California have yet yielded.

The Year-Book of Facts in Science and Art. By JOHN TIMBS, Editor of the *Arcana of Science and Art.* London: David Bogue, Fleet-street.

This interesting annual, which we have before had occasion so favourably to notice, has now made its appearance for the present year, and contains a lucid abridged description of the varied discoveries, inventions, and progress of science and the arts during 1850; comprising mechanical, useful, and decorative arts, natural philosophy, chemical science, natural history, geology, astronomical and meteorological phenomena, and an obituary of persons eminent in science and the arts, and exhibits the most important discoveries and improvements during the past year. There is a biographical notice of Robert Stephenson, Esq., M.P., F.R.S., illustrated by a portrait engraved from a daguerrotype by Kilburn, photographer to the Queen, which is a faithful likeness. It is also intended to publish an extra volume at Midsummer, specially devoted to the history, progress, and contents of the Great Exhibition.

A Compendium of British Mining.

BY J. Y. WATSON, ESQ., F.G.S.

No. VI.—THE SYSTEM OF CORNISH MINING.—*(Concluded.)*

The discovery of gunpowder forms a grand epoch in the history of mining, but it is difficult to ascertain the exact time when blasting first came into use among Cornish miners. It was first used in Hungary or Germany, about 1620, and was introduced into England at the copper mines at Ecton, in Staffordshire, by German miners, brought over by Prince Rupert. It was not known in Somersetshire until 1634, after which the Cornish became acquainted with it; and it is supposed to have been first used in the districts of Lelant, Zennor, and St. Ives, by two men, who came from the East, named Bell and Case, and who kept their operations a secret, suffering no one to see them charge the holes, till a man of Zennor, hiding himself upon a bolt, saw what they were about. In blasting, a hole is made in the rock with a steel borer, which hole is one-third filled with gunpowder, the force being confined with a wedge, or by "tamping" over with some soft material, and is then set fire to, by means of a safety-fuse, lighted at some distance, and large portions of the rock, or lode, are forced off. The annual value of gunpowder used in Cornish mines has been estimated at 13,200*l.*, the quantity being about 300 tons, of 2000 lbs. each. The steam-power employed in Great Britain, for mining purposes, may be estimated as amounting to the labour of 150,000 horses, or to that of 750,000 men. The first steam-engine erected in Cornwall (under the plan of Newcomen, who obtained a patent in 1705) was on Wheal Vor Mine, in Breage, between the years 1710 and 1714; the second at Wheal Fortune, in Ludgvan, in the year 1720. Newcomen's were superseded by Watt's engine in 1778—one of the latter, of 30-in. cylinder, being then at work at Wheal Busy (Chacewater). Pryce describes this engine as working "a pump of 6½ in. in diameter, in two shafts, by flat-rods, with great friction, 300 ft. distant from each other, 45 fms. deep in each shaft, equal in all to 90 fms.," and as making "14 strokes, of 8 feet long, per minute, with a consumption of coals, less than 20 bushels, in 24 hours."

Mr. Watt's great improvements in the steam-engine were—condensing in a vessel distinct from the working cylinder with the necessary use of an air-pump, and making steam the moving power instead of the atmosphere. By those contrivances the working cylinder is always maintained at a temperature equal to that of the steam; and as the condensing vessel is, on the other hand, essentially kept cool, the vacuum must obviously be produced by mechanical means, and not through the medium of steam. To ascertain the amount of fuel saved by working Watt's engines, a *counter* was invented by Mr. Watt, which, being attached to the main beam, marked the number of its vibrations, from which the work done by the engine was calculated, and the amount of coal consumed being ascertained, the saving was found. On the expiration of Mr. Watt's patent, the *counter*, although it was retained in some mines for the satisfaction of the agents, appears to have been generally given up. In 1812, Capt. Joel Lean suggested the plan of placing a *counter* on every engine in Cornwall, and of publishing monthly accounts of the duty performed by them, and the peculiar circumstances of the different engines. The duty is estimated by ascertaining the number of pounds' weight which are lifted one foot high by them, by the consumption of one bushel of coals. Capt. Lean, by most of the mining adventurers, is appointed to fix a counter upon the various engines to be reported monthly; the counter is furnished with a Bramah's lock, the key of which Captain Lean keeps, and it is inspected by him once a month. Sometimes another counter is attached to the engine, which is open to the inspection of the engineer, the agents of the mine, and the enginemen. A separate party supplies the coals, which are delivered to the order of the enginemen, as they may be required, the orders being first examined and countersigned by Capt. Lean. At the end of each month, the coals not consumed are measured, and thus the real amount consumed is ascertained. This being done, and the counter examined, the *duty papers* are published, and include not only an account of pumping engines, but also of those employed in drawing ores up the shafts, and in stamping ores.

On the adoption of this suggestion of Capt. Lean's, and by the periodical publication of the results, so much emulation was excited in the engineers and enginemen, that by keeping the machinery in better order, by close attention to the fires, and by sundry trivial improvements, the benefits of this measure were almost immediately felt. Until the publication of these accounts, few of the mines had adopted the shallow fire-places; but when the parties concerned found that their credit was at stake, every method was adopted, by which a saving of fuel could possibly be effected. The *counter*, therefore, instead of being considered as a direct improvement, ought, perhaps, rather to be regarded as the cause of other improvements. The Cornish pumping-engines of the present day stand pre-eminent, and mines are worked which must long since have been abandoned but for them.

In large adventures the ores are very commonly raised to the surface by steam-whims, one of which is contrived, by the means of flat-rods, to draw from two shafts, and sometimes three; and these engines afford great advantages in working a mine where water is scarce, and horse-whims would be insufficient. The ore and *deads* were formerly brought to the surface by the labour of horses. The difference in expense of steam and horses for this purpose is nearly 50 per cent. From the increased number, and the increased depth of the mines, this work could not possibly be performed at present by horses.

In the eastern district, where water is more plentiful, there are several large water-whims, especially at Fowey Consols and Wheal Friendship, which will be described under the heads of those mines. Where the supply of water is precious, large sums of money are often paid in Cornwall and Devon for the use of it; and no small contrivance is frequently exhibited in turning a stream to the greatest account, which was once fully exemplified at Wheal Uny Mine, in the Gwennap district. The Charlestown Mines, in St. Austell, paid 350*l.* per year water rent. In a mine, called Wheal Reeth, which is 160 fms. deep, the quantity of water was so small that, although all drawn to the surface by a steam-engine, it was not sufficient for *stamping* and *dressing* the tin ore raised from the mine; the *country*, or rock, through which the vein passed, was granite.

ON "BOUNDING."

Having in the previous chapters described the general features of mines, and the modes of working them, it may be interesting, before proceeding to particularise the mining districts, to notice the ancient custom of bounding, which we do, condensed, from a work by J. Basset, Esq., M.A.:—

Bounding is the marking out certain bounds on the surface of land which either now is, or was formerly, waste land. The person having so marked out his bounds, notices, and causes proclamations to be made of them in the local court, called the Stannary Court, and gives notice also to the owner of the soil, who may, if he pleases, within a certain time, himself elect to work the tin within the lands; but if he do not so, the bounder has an exclusive right to dig, and work for, and take the tin, under and within the land so bounded. To compensate the owner of the soil for the entry and taking of his tin, the bounder pays to him certain dues, called "toll-tin," being sometimes 1-15th or 1-10th of the ore brought to the surface. It varies according to custom, and not according to the will of the owner of the soil. He cannot demand what amount of toll he may choose, for that would render the custom and privilege of bounding nugatory. The Duke of Cornwall is, or rather was (for some have been sold), owner of 17 manors in the county of Cornwall, called sometimes the ancient duchy manor, sometimes the ancient duchy, or duchy, sometimes assessionable manors, because formerly, it seems his ministers used to go down at certain periods and assess the rents; and when the manors have been sold, he is still, by reservation, owner of the minerals under all the wastes and conventionary tenements of those manors. In this respect, the duke (without reference to any actual right) appears to claim no more than any other owner of the soil in the county. If bounds exist on his wastes, or conventionary tenements, the bounders pay him the tolls, just as they would pay any private individual owner of the soil. The owner of the soil has an option of taking the bounds, and, at times, when the owner has been a resident gentleman, he has chosen to take the bounds, and has demised the right of working them to those whom he might know, and with whom he might wish to deal; he would naturally prefer a tenant of his own choice to one imposed on him by the custom. But the Duke of Cornwall, from his station, and many from choice, do not elect to work the bounds on their respective lands. The boundowners, therefore, not owners of the soil, having the right to work, often demise that right to others; these last are the actual miners, and are subject to two demands—that due by custom to the owners of the soil, and that due by compact to the owner of the bounds; and, without meaning to imply there is any strict analogy, it may be assimilated, by way of illustration, to the position of the farmer who pays tithes to his clergyman and rent to his landlord. From this it will appear, that the right to the boundowner's proportion (sometimes called tin dues, or farm dues), and that to toll-tin cannot legally clash; the tin-worker must pay both, and it is his own fault if he chooses to take a sett, as a demise of bounds is called, at a rate which leaves him no profit after toll-tin and toll dues are paid. Generally, the owners of the soil, or toll, may look to the bounder for payment, the actual worker of the mine being, as regards him, the agent or servant of the bounder, and with whom the owner of the soil has no priority.

[To be continued in next week's Mining Journal.]

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Feb. 1, was—No. of passengers, 17,806.—Amount of money, £74 3s. 10d.

Original Correspondence.

PROGRESS OF MINING IN CARDIGANSHIRE.

SIR,—In no county of the United Kingdom has a greater change taken place than in the Cardiganshire Mines in a period of half a century; and as a little information on this head will, no doubt, be interesting to some of your readers, I enclose a few particulars for their perusal. Notwithstanding that the Cardiganshire Mines at some period must have been unrivalled by any in Great Britain (especially if we are to receive Mr. Waller's statements as correct), in the year 1800 there was but one person, I believe, who at all understood the value of these mines. This was Sir Thomas Bonsall, a Derbyshire man, who was not in affluent circumstances when he first entered this county, but who in a few years amassed a large fortune, and died wealthy. The principal mines worked by him were Cwmystwith, Grogwinion, and Gellir-eirin, and perhaps, on an average, he might have employed about 150 persons. At the time of Sir Thomas's death the county was almost abandoned. A Mr. Sheldon, who understood mining but very imperfectly, employed a few people to raise ore by the ton, and some small farmers in the neighbourhood occasionally tried their luck to raise a ton or two, sometimes being fortunate and sometimes the reverse. About the year 1825, there was a very wealthy company, who entered the field, and selected some of the now best mines in the county, amongst which are the Lisburne Mines, Daren, Cwm Symlog, &c.; they worked them, however, for ten years at some loss, and eventually sold their interest in them to a company formed by Mr. Taylor, sen., in London, and managed by Capt. Absalom Francis, of Flintshire, and Capt. Matthew Francis, of Goginan. The purchase of these mines took place about the year 1834, and in the following year the Lisburne Mines made good profits, and the value of these mines are at present about fourteen times the purchase money at that time. At the same time, Sir Thos. Alderson, who worked Cwmystwith to a small extent, sold this mine to a Mr. Pugh, of Aberystwyth: this soon proved to be a profitable purchase, and from this time mining began to revive. From the time of Sir Thos. Bonsall's death, to 1835, I think there could not have been engaged in all the mines above 300 persons. I do not intend to go minutely into the statements of the progress mining made from year to year: suffice it to say, that within a period of 15 years the number of persons engaged in mining in Cardiganshire have increased from a few hundreds to almost 10,000. Before I close, I will give you a list of the mines at work in adistrict of about 10 miles square, beginning south and taking them northward:—

Llwynmalees	Level Newyd
Lisburne Mines	Cwm Erfin
Grogwinion	Cwm Sebon
Cwmystwyth	Daren
Esgair Llee	Cwm Daren
Gwaith Goch	East Daren
Rhiw-riggas	Cwm Symlog
Cae-gynon	Bronfloyd
Gellir-eirin	Court Grange
Bwich Gwyn, or Nanteos Mine	Cefn Gwyn
Penrhiw	Allt-y Crib
Cefn Brnno	Bryn-Arian
Goginan	Pen-y-bank and Erglodd
Bwich Consols	The Potosi,—and some others.

In most of these mines, where money has been expended properly, success has been the issue, and considering the small amount of capital required to work the mines in this county, I consider it one of the best districts of the present day.—ABSALOM FRANCIS: *Goginan, Jan.* 29.

THE GREATEST PRODUCE FROM ANY ONE MINE.

SIR,—I observed in the *Mining Journal* of last week a controversy between two parties, whether any piece of mining ground in Cornwall has yielded a greater worth of ores than the Great St. George Mines within similar limits—viz.: amount, 500,000*l.*; period, 50 years; length, 600 fms.; width, 200 fms. (60 fms. below adit). As the contending parties desire to be set aright, I beg to state that the Great Crinnis, near St. Austell, produced *treble* that amount in *half the period*, and *one-third* the space. I may further state that one party of men raised in the Great Crinnis, in a take of two months, 1500 tons, sold at 15*l.* per ton = 22,500*l.*; and I shall be glad if any of your correspondents can inform me whether any other mine in this county, or Devon, has done equal to it.

St. Austell, Feb. 5. DECIDER.

A CORNISH MINER'S RAMBLE.

SIR,—I have for many years been a constant reader of your valuable Journal, and until within a few years have been a hardworking miner in Cornwall; but by luck in tributing, and care, have saved a few hundred pounds. Another good fortune has also happened. I have fallen heir to a few thousand pounds; out of this I have laid out 2000*l.* in mining property in different setts; and, I am proud to say, that luck seems on friendly terms with me, and all my shares are returning me handsome dividends.

Having now got an independency, I made up my mind to go and see other mining counties besides my own (Cornwall and Devon); and having heard a good deal of the Derbyshire mines, I made the best of my way to Derby. I was much disappointed when I got there, for, to my great surprise, I was told there was no mining of any account within many miles. After spending two days in this beautiful district, I was directed to Wirksworth, where I found little doing. Most of the old mines, I was told, were exhausted, and a great many entirely abandoned. From Wirksworth I went to that beautiful place Matlock, where I learned that, many ages back, abundance of work had been done, and very great riches got. From Matlock I made my way on for a small village called Darley. At this place, and at Wensley, I spent two days;—like the other places I had seen, the mines were very ancient and poor. I am no lead miner, but if I must give an opinion, I should say none of these mines have been fairly proved. All the mines are in limestone, and, from what I can see, the veins are of a very regular nature; they call veins "rakes" in these parts, and for lodes they have the same name. I have now reached the small town of Winster, seven miles from Matlock, where I stayed three more days, and managed to pick up a few old miners, one of whom had been in Cornwall. From these brother chips I learned the history of all the principal mines in Derbyshire.

I shall be trespassing too much to detail you one-tenth part of my information; but one particular I wish to apprise you of—that is, a sort of lava, at a certain depth, is found, and when down to it, the vein and all minerals disappear!

The miner who had been in Cornwall I found had tamped a deal, and I inquired where were the great copper mines I had heard of, getting more than a million of profit to the adventurers, when, to my surprise, he told me they were in Staffordshire.

The Ecton Mine is at the east end of the mountain. The adjoining mine is called the Clayton or the Burgoyne Mine. I find that the mineral right belongs to the Burgoyne family; and from the information I have had from my Winster friend and others, the prospect now in sight is better at the depth than ever the old mine was. The Burgoyne sett is very extensive—two miles long, and more than one broad. I was much disappointed in not seeing the captain of the Burgoyne Mine. I found he was the nephew of the late eminent miner, Sir Thomas Bonsall, and a most respectable man, and a good miner.

During my ramble about this interesting mountain I saw but one miner, and from what I could gather from him, there were three excellent works under water. A new company he said had been formed in London, and operations were about commencing to unwater the mine. I found there were other mines in these parts where abundance of copper had been got. The Mixon Mine, about four miles from the Ecton, I am told, has been very rich; this mine, in its formation, is similar to Ecton and Burgoyne; all of them are called "pipes." My Winster friend recommended me to see a new copper mine near to Mixon, the Roylage Mine. The captain, he said, had been a practical miner for 31 years and upwards in the Staffordshire mines. This mine is about one mile from the Mixon Mine. There is a mine adjoining this called the New York Mine. I found the captain of the Roylage Mine a first-rate miner, as my Winster friend said I should. The Ecton and Burgoyne Mines he had been a working miner in for many years. If I were to detail all he said of these mines, there are few who would credit what he said about them (tens of thousands of tons of ore in solid masses). I purpose visiting these mines again ere long, when I hope to find the captain at home, through whose kindness I hope to see these vast excavations, and, if agreeable, you shall hear more of my ramble. This most agreeable man (Capt. Kniveton, of Roylage Mine) found me a dress, and I walked up the adit level to where his men (four in number) were at work. This is certainly the most promising mine at the depth I was ever in (15 fms.); I never saw in Cornwall or Devon anything to compare to it. The immense width of the lode is a wonder; I did not measure, but if I guess it at from 30 to 40 feet wide, I am sure I am within bounds. They are now working on this lode, in which there is copper of every colour, and of high produce—all of it carbonate down to the adit, under which, as far as is known, is sulphate of copper. This mine has been worked by the present company about two years, and never more than by four men at any time underground. It appears they have sold some few hundred tons of ore in this short time, got by the four men only, and, from my judgment, they have now upwards of 130 tons at grass. This monstrous lode, and three others, forms a junction about the middle of their sett. At this point they commenced sinking an engine-shaft more than 12 months ago, but from the quantity of water coming in they were obliged to stop.

The New York, the adjoining mine, are under agreement to clear off the water from Roylage Mine. This is a matter in dispute, and a very one-sided affair it appears, and which has prevented them getting some thousands of tons of ore. I saw in your Journal that the New York Company had been trespassing on the Roylage Company. It would do your eyes good to see it; as I have already said, I never saw anything to compare at the same depth. I will again write, and give you a detailed account of this fine mineral county. I am now going to North and South Wales, and will write you again soon of what I see in my Welsh rambles.—WM. WILLIAMS: *Rushton, near Leek, Jan.* 29.

PRACTICAL MINING.

SIR,—I am aware that it is much easier to ask questions than to answer them; but if any of your talented correspondents will be kind enough to afford the following information, I should be greatly obliged:—

1. The inclination, or underlie, of a lode is 1 in 6 *south*, and the inclination, or underlie, of the strata is 1 in 6 *north*.
2. The inclination, or underlie, of a lode is 2 in 6 *south*, and the angle, or underlie, of the strata is conformable to the underlie of the lode.
3. The inclination of a lode is 1 ft. 6 in. in 6 *north*, and the angle of the strata is 1 ft. 6 in. in 6 *south*.
4. A lode is vertical, and the strata also.
5. The *direction* of a lode, or its line of bearing, is conformable with the cleavage or *direction* of the strata.
6. The *direction* of a lode cuts obliquely 20° *south* of *east* and *north* of *west* through the strata.
7. The *direction* of a lode cuts obliquely 15 or 20° *north* of *east* and *south* of *west* through the strata; and lastly, which of the above lodes, supposing their contents, and the strata also, to be similar, would be likely to contain the greatest quantity of mineral? and why? I ask these questions, not from idle curiosity, but for the sake of information; seeing in advertisements and communications in your valuable Journal that scientific men have reduced the system of mining to a *certainty*, it would be most desirable that they should impart a degree of the *certainty* and knowledge they possess to those engaged in mining pursuits in the sister isle.—T. G.: *Carrigbuie, Co. Cork, Jan.* 31.

MINING AND (SCIENTIFIC) CLAIRVOYANCE.

SIR,—One evening in 1841 or 1842, an intelligent friend of mine, on the mail between Plymouth and Tavistock, met with Mr. Evan Hopkins, C.E., whose knowledge of geology and practical mining has earned for him deserved popularity, as well as the confidence of the capitalist. Passing through such a district, men well versed in these matters inevitably conversed on mines and mineralogy; and looking over the piece of ground, including Wheal Anderton and Wheal Ash, now part of the United Mines, Tavistock, and the Crowndale setts, he remarked, "*There must be immense metalliferous deposits in this ground, lying as it does between the granite ranges of Heigaston and Dartmoor.*" It is remarkable, that at that time Mr. Hopkins was close to the recent discovery on the Rix Hill lode, and passing through the United Mines, Tavistock.—AN OBSERVER: *Tavistock, Feb.* 4.

GREAT SHEBA CONSOLS.

SIR,—I beg, through your kindness, to submit the following queries to your correspondent, "Z.," of Exeter:—

1. Would "Z." have complained of the report on the above mine not being official, nor authorised by any shareholder, had it been a favourable instead of an unfavourable report?
2. Where is the object shown in the said report, "to frighten the timid, and bring shares into the market?" Are "Z.'s" ideas of mining so limited, that he thinks about nothing but the shares in a mine? Do the *public interests* never enter into his mining thoughts?
3. If no such discovery has taken place in the east of Cornwall since the Great Devon Consols (as asserted by "Z."), so much the better for the discoverers and adventurers. Does "Z." think that any right-minded person would be, or has the slightest reason to be, envious of the success and prosperity of any mine, and, if so, why of Sheba?
4. What has the success, or non-success, of a neighbouring mine, "over which somebody has had the 'honour' to be placed for the last 10 years, without fortune smiling on his exertions," to do with Great Wheal Sheba? This part of "Z.'s" letter appears to me very cloudy, and requires special elucidation.

The nature of the answers to these queries will prove whether or not "fortune smiles on the exertions" of "Z." to forward the true interests of mining, which, however, it is difficult to do, either by personalities or generalities. Facts are best for all parties, and it is more germane to the matter of Wheal Sheba to insert reports from practical men (such as E. Hopkins, A. Dunstan, and S. Seccombe) presenting tangible points for criticism by those who understand the science of mining; and I must say of these reports, that they augur well for the future success of this mine. A MINING BROKER.

London, Feb. 7.

WEST DOWNS MINE.

SIR,—I think the letter in your last Journal, from Mr. Johnson, calls for some explanation from me. I presume from that letter it would be inferred that Mr. Johnson "signed off," or relinquished his shares, in accordance with the privilege afforded to all adventurers in mines conducted upon the true Cost-book Principle, and that I, as the purser, neglected to enter the same in the books of the company; to which I most distinctly declare that no such relinquishment, either verbally or in writing, was ever handed to me as purser of the mine; and had such been the case, I should not have departed from what I have always considered to be the rule on that point—viz.: not to accept any relinquishment of shares, unless accompanied by a payment of an equitable proportion of the costs incurred up to that time. The estimated quantity of ore at surface, and other assets, could not be taken into account *at the same time*, and placed as a set-off against the debts of the mine; but the assets should be valued by competent and impartial persons, and the outgoing adventurer should receive his share of them some time afterwards, according to custom;—consequently any remarks I may have made about the tin, &c., exceeding the liabilities were not associated by me with any contemplated relinquishment.

Hewton, Feb. 4. J. DIAMOND.

LANIVET CONSOLS.

SIR,—The Silver Valley and Wheal Brothers Mine has quickly found a sister undertaking in the Lanivet Consols, advertised in your Journal of this week as in 10,000 shares of 1*l.* each, paid-up, and on the Cost-book System! The promoters of Lanivet Consols inform the public that "27,000*l.* worth of copper ore was raised therefrom within a few years of imperfect and partial working." In fairness, they should say also what were the costs of the mine during the said period, because every one conversant with the mining events of the last few years is aware that it became a "knocked" mine from great losses, owing to its not paying its costs, although that event was accelerated by the inability of a large shareholder to pay further calls. That there is ore in Lanivet still cannot be doubted; but that the searches for it were "imperfect and partial" is very much to be doubted, since its management was never complained of, so far as I am aware. It is a deep mine. What will it cost to restore the shafts and levels, now full of water and *debris*, and to erect suitable machinery, including a powerful steam-engine? These are items that appear really to be worth discussion in a prospectus; but the "go by" is given to them, perhaps for the sake of brevity. How many more of these concoctions are yet to appear, it is, of course, difficult to foresee; at present, however, "the cry is still, they come."—MENTOR: *London, Feb.* 7.

TYN-Y-WORGLOD SLATE QUARRY.

SIR,—Observing in your last Number the highly-favourable report of this quarry, showing the great profit that would be derived from carrying the works out on a large scale, and knowing highly-favourable reports too often cause companies to embark their capital without using due caution and economy, I would just remark that in one instance a party called me in to inspect their quarry, a few months since, where 30,000*l.* had been spent in opening works, which I pronounced to be all but worthless. Had they spent from 3000*l.* to 5000*l.* first in proving as to the quantity and quality of the slate, it would have been quite sufficient.

I now beg to hint to Mr. St. Pierre Foley that, had it been my case, I should first proceed on the most improved plan to open out the old quarry, where I fully believe room will be found for 50 men; and, after working it for one year, bring my balance-sheet before the company, showing them there was 2500*l.* clear profit, when they would, doubtless, gladly allow that 2500*l.* to be expended in opening one of his proposed new floors to employ his second 50 men, to give a further 2500*l.*, to be again expended in opening out a fresh quarry; in so doing, the 3500*l.* in hand would be quite sufficient, and the quarry would work its way up to a large dividend-paying concern, without additional call. I admit that slate quarries are not so fluctuating as mines, and are generally safe investments; but great caution is required in early operations, and proofs returned as to its capability, before spending 20,000*l.* or 50,000*l.* If a slate quarry will not pay to commence with 50 men, it is not worth working. The advantage gained on a large number of men is only in proportion to the 50, allowing for a less proportion of agency, rent, and a few other incidental expenses. It is over speculating on vague reports that too often ruin companies. I do not mean to insinuate that this is a fictitious report. I only say the company should prove it, before they risk a large amount of capital. Quarries are not like mines; the former can be proved for a small outlay.

Mr. Hopkins's report, if favourable, is certainly a great inducement to the shareholders. Although I have never had the pleasure of meeting him but once, and then only for a few minutes, I have narrowly watched his reports, and find him very cautious. They are grounded on Nature's laws; and his small number of favourable reports, I think, are not above the average of paying mines. It matters not who the man is that sets up for a reporter, if his favourable reports exceed the average of dividend-paying mines, the public have only to guard against him. They should be very far below the average, as but few call a doctor for the man that is carrying off the palms of victory. There are many that I could mention who have issued 20 successive reports before the public, grounded on kindly gossans, and recommending the party to sink deeper, as a certainty of their turning up trumps.

I must not omit alluding to Mr. St. Pierre Foley's remarks on small ladies and doubles; and should be obliged by his informing me if he has a *market*, the prices, and about the profits arising therefrom. I thought them like *shoe buckles*, not the fashion of the day. I am situated within about 16 miles of 12 market towns; and I make but very few small ladies, and throw away all the doubles as worthless. N. ENNOR.

Oakhampton Slate Quarries, Wiveliscombe, Feb. 4.

THE GEOLOGICAL FEATURES OF THE TAVISTOCK DISTRICT.

SIR,—It was with pleasure I read Mr. Evan Hopkins's remarks on the rock formation in this district; and I am sure my Tavistock friends must be delighted to find that talented man so ready in coming forward and giving a description of this highly-interesting district. His attention being now particularly drawn to it, and he having frequent opportunities of visiting the mines, I have no doubt but he will, on an early occasion, give us some very interesting remarks as to their particular features, and also tell us the reason why some of the lodes were not cut rich in the tunnel through the hill at Mordown, and whether any one has taken the large elvan course there for a copper lode.—N. ENNOR: *Wiveliscombe, February* 4.

THE ORIGIN OF ORES IN LODES.

SIR,—From the tenor of your remarks in the "Notices to Correspondents," last week, I gather that you wish this subject to close; I shall, therefore, be as brief as possible, reserving to myself for another opportunity the exposure of the spurious science which has foisted itself on the mining public. If your correspondents, Messrs. Ennor and Dumaresq, had displayed any knowledge of those sciences inseparably connected with metallurgy and mineralogy, I should have willingly, though at the present moment at great inconvenience, have entered into a friendly discussion on this most important subject to all interested in mining speculations. As the matter stands, it would be as undignified as unprofitable to continue a newspaper squabble. In order to justify these observations, I may be permitted to remark that Mr. Dumaresq, commenting on Mr. Ennor's letter, observes—"Had the rocks been exposed to melting heat, a great part of the ore would *necessarily* have been reduced into a metallic state." This I deny; no such necessity exists. Galena *may be* exposed to fusion for 1000 years without being reduced to the metallic form. Mr. Dumaresq states that he has visited the Saxon Mines, and is acquainted with the smelting operations of that district. If so, it only proves that Mr. Dumaresq has travelled far and learned little. Berthier, the best authority on the chemistry of metallurgy, gives in his work the analysis of 14 different mattes—viz., from Pezey, Villifort, Poulaouen, the Hartz, Holzapel, Pontgibaud, and Untermuld, near Freiburg. Of one of the mattes from Poulaouen, he observes—"*La matte resemble à de la galèni.*" This I have seen frequently; and by certain mixtures can obtain it at any time in an appropriate furnace, including also the accompanying minerals, other than those which have evidently been formed by infiltration, subsequent to the original projection of the ores and its general mineral accompaniments. Mr. Dumaresq appears to be equally unin-structed by reading as well as travelling. If Mr. Ennor sincerely believes in the imputation conveyed in the commencement of his letter, it is most surprising that he should offer the hand of friendship to one so utterly despicable as I should feel myself if the charge was true, even at the price of abandoning what he terms *Puseyite* principles. Instead of the smelting of lead ores, especially those much contaminated with earthy and other foreign bodies, being well understood, the contrary is the case; and the smelters and boys, both of Cornwall and other places, have much to learn. With persons who by their correspondence show they are competent to enter into this controversy, I shall have no objection to renew the subject. I cannot, however, spare time to teach persons science step by step.—T. ROWLANDSON: *London, Feb.* 5.

[Our wish was, by declining the letters of last week, to prevent, as far as possible, a discussion, which might be one of scientific importance, merging into "a newspaper squabble." We are at all times anxious to allow our correspondents every possible opportunity to fully record their opinions, and shall have pleasure in affording the necessary space for an exposition of the views of Mr. Rowlandson.]

GREAT SHEBA CONSOLS.

SIR,—It is gratifying to me, by reading your valuable Journal for the last fortnight, in seeing repeated hints respecting the present prospects of this mine, to which I beg to say that facts are stubborn things; they are like water that will have levels. Let those who doubt the extraordinary features of the mine come and judge for themselves, as it is not locked up, but perfectly free for the inspection of those who are practical judges. It is true, we have not a course of ore as in large dividend-paying mines; but we have rocks of ore in course of dressing much heavier than I have strength to heave. This course of ore appears to be gone down in the bottom of the adit level for many fathoms in length, but the ore we have now in course of dressing we are breaking from the back, under a regular mass of rich gossan, about 9 fms. deep from surface. Both our shafts are in course of sinking to intersect two distinct lodes, one about 14 fms. deep from surface, and the other about 60 fms., but intend to cross-cut the latter in the 20 fm. level. All I shall say is, that if anything can be said for indications, we have every chance for a rich mine. I also further state that there are no similar prospects held forth for many miles east or west of us, although I am happy to state that our neighbouring mines are looking very promising. I am confident my assertions will be borne out by every practical man who may, without prejudice, inspect and report on the mine; and if any mine in Cornwall or Devon cannot bear the inspection of five or six practical agents, the sooner it goes to ground the better, both for the neighbourhood and capitalist. Therefore let us "One and All" stick to facts, and try, if possible, to bring capitalists into mines for the market, instead of market for mines.

Great Sheba Consols, Feb. 6. JOHN SPARGO.

SILVER VALLEY AND WHEAL BROTHERS.

SIR,—I have read your article in last Saturday's Journal, commenting in no measured terms upon the prospectus of a mining company, which professes, under the Cost book System, to issue scrip certificates, to secure shareholders against further liability; also commenting upon the figures and statements contained therein in a manner which I do not think you would have considered yourself justified in doing, had you made yourself acquainted with the facts and merits of the undertaking. As the public require at least justice from a public journalist, I trust you will insert this reply.

In the article referred to, you have commented upon the statements put forth in the prospectus in question as if untrue; but you do not refute them. Heigaston Down bears strictly the reputation given to it, and has always borne it—as witness the couplet you have noticed. This couplet is simply corroborative evidence of the same opinion of the mineral wealth of this district being held centuries ago. Symons's geological map proves Devon Consols to be situate as stated. Wheal Brothers Mine was originally brought out in 100 shares, of 5*l.* each, and not in 1000, as *assumed* by you. We stated these shares were sold in some instances as high as 1100*l.* per share. The fact is, one was sold for upwards of 2000*l.* You say we will "illustrate" our comments "with a few facts and figures;" and your illustration commences—"The mine was formed of 1000 shares, on which we will *assume* 10s. per share was paid," &c. Sir, it is simply ridiculous to speak of *facts*, based on assumption. You contradict the fact of any share having been sold for 1100*l.*, which would only give 110,000*l.* as the value of the mine; and then very gravely add that shares were sold at such a price (40*l.* for a 5000th part) as only brought the value of the mine to 200,000! For the other figures of the prospectus, I appeal from the *Mining Journal* of the 1st of Feb., 1851, to the *Mining Journal* of the 16th April, 1836, and to numerous official reports prior to that date. To corroborate the statements made of the quantities of silver ores raised in short periods of time at Wheal Brothers, I may state that, since the prospectus has been in print, I have seen an eminent assayer of silver ores, a gentleman of the highest respectability, who informed me that he personally broke silver ore of the value of 35*l.* from Wheal Brothers Mine in three-quarters of an hour—a stone of which, containing 90 per cent. of pure silver, he has now in his possession. As I have his permission, I shall be happy to introduce you personally to inspect it.

I have referred only to Wheal Brothers, the great feature of the prospectus; I will now shortly refer to Silver Valley sett. Most undoubtedly a considerable sum must have been spent in preliminary works—such as sinking shafts, driving levels, building engine-house, necessary workshops, account-house, and a house for the preparation of arsenic, all of which exist, and are the property of the present company. Was the mine ever proved? Was the fine copper lode, which produced good stones of ore at a shallow level, ever cut at the deep level? The answer is no; and this mine will be drained by the same steam-engine which will be erected to explore the great silver lode at Wheal Brothers; and this promising copper lode can be cut in the 50 fm. level by the mere driving of a cross-cut 5 or 6 fathoms. This lode alone may render the undertaking one of great profit, and most respectable mine agents state the tin lode will pay all the expenses of the mine.

You insinuate that the mine cost the present proprietors nothing, without possessing any knowledge or authority to justify you in so doing. The trustees, some months ago, purchased the mine for a sum of money and a considerable number of shares, and the works done on behalf of the present company have greatly increased the value of the undertaking. During the progress of these works, pitches were offered to be taken at a tribute of 5s. in 1*l.* You observe "it out-Herod's Herod," in stating that the mine will be worked under the Cost-book System, and then proposing to issue scrip certificates, to ensure the public from liability. If you will favour me with a call at the office of the company, I shall be happy to explain fully to you the mode proposed to be adopted for conducting the affairs of this mine. I shall simply state here that the cost-book will be kept in the usual manner, and will be signed by the trustees and proprietors. You are well aware mining undertakings fail from many other causes than poverty of the mine, and that inadequacy of capital, arising too

requently from the number of defaulters when calls are made, deterring the more punctual shareholders from incurring further liability, is not the least of these causes. The trustees are of opinion that, considering the number of shares into which this mine is divided, the only guarantee for those who desire in good faith to become shareholders in this undertaking, for the work being legitimately carried out, is the calling up of the whole of the capital at once.

London, Feb. 6. A PROPRIETOR.

[Some remarks on this communication will be found in another column.]

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in the 70 fm. level, east of Field's engine-shaft, is 9 ft. wide, 4 ft. of the south part principally capels, the remaining 5 ft. of the north is worth for copper ore from 60*l.* to 70*l.* per fm. The lode in the rise and stopes over back of said level is worth quite as much as reported last week—viz., from 120*l.* to 140*l.* per fm. The lode in the winze sinking under the 60 fm. level, west of Wyld's shaft, is 9 ft. wide, worth for copper ore about 100*l.* per fm. We intend rising on the south part of the lode over the 70 fm. level; also sinking on the south part of the lode in the winze west of Wyld's shaft, so as to effect a communication with the winze and rise, for the better ventilation of the 70 fm. level, which we hope will be done in the course of two or three days. The men in Wyld's shaft are opening piat in the 60 fm. level, preparatory to the sinking under the said level. Since this shaft has been communicated to the 60 fm. level, our ventilation has very much improved. We shall at our next setting set some new tribute ground over the 60 fm. level. We have taken out the old boiler at the steam-whim, and are this day engaged in putting the repaired one in its place, and shall put as many men as can possibly work about the same, night and day, until the work is completed. When this is done, we shall commence sinking Field's engine-shaft under the 80 fm. level, and also drive that level east of said shaft. The lode in the 10 fm. level, east of Wyld's shaft, is from 1 to 2 ft. wide, composed of gossan, mundic, capels, and some copper ore, which, we think, are good indications. Owing to the vast quantity of rain, the water is increased very much.

BARRISTOWN.—In driving on the course of the slide we have intersected several small branches of carbonate of iron and blende, with small portions of lead; but being so near the slide, I thought it judicious to cut in south a little upon them, as there is water issuing from that direction, and it is just in this spot where we might expect the caunter part of the old lode. In the end east the branch is small, and from its appearance it is very unpromising. The ground in the cross-cut is much the same as heretofore—favourable for exploring, and with an occasional branch of spar and gossan heads.

BEDFORD UNITED.—The lode in the 115 fm. level, east of the engine-shaft, is 3 ft. wide, producing fine stones of ore, and is altogether a very promising lode; in this level, east of Andrews' winze, the lode remains unaltered; we shall cut into the lode in this level west by setting day. There is no alteration in the 103 fm. level east; the lode still continues to yield 10 tons of ore per fm. We shall commence cutting into the lode in the 90 and 80 fm. levels to-morrow. In Arscott's winze, in the 90 fm. level east, the lode is 3 ft. wide, and will produce 10 tons of ore per fm. The ground in the 47 fm. level north is a little improved. We weighed, at Morwellham, November ores, 137 tons 4 cwts. 2 lbs., and sampled December ores, computed 140 tons.

BLACK CRAIG AND CRAIGTON.—Three months since, when I arrived here from Cornwall, I found the mine drained to the 25, and the 25 fathom level opened only about 20 fathoms to the west of the Welsh shaft. From this point to the old engine-shaft, for 58 fms. in length, I found choke full of rubbish; the clearing and securing of this level is now nearly completed. The Welsh shaft I found too small to admit room enough for the pumpwork ladder-road, and to work the kibbles to draw stuff, and consequently was under the necessity of enlarging it; this also is now accomplished, but I am sorry to say that this has not been the only hinderance we have had to overcome: just as we got the shaft and level in working order, our progress under the adit was brought to a sudden stand still, by a run or crush in the main adit, which prevented the discharge of the water from the mine, and obliged us to stop the engine until we got it repaired: we then reset the engine to work, and again drained the mine, and just as this was done, we met with a second crush to the east of the former one, and soon after the timber supporting the roof sank so much, in consequence of the shrinking of the stuff in the sole of the level, that it was found useless; therefore, we are under the necessity of driving a side adit, 18 fms. in length, on the north side of the crush; this also has been completed, the railroad laid, and the engine again set to work. Had we not met with this accident in the adit, we should have had, no doubt, 40 tons of ore raised from the 25 by this time, as there is a lode in this level which will yield upwards of 2 tons of lead ore per fm. I have no hesitation in giving it as my candid opinion that you have very good prospects in Black Craig Mine, and I have no doubt it will prove a good concern. I think it would be to the advantage of the shareholders if they would work the Craigton sett on the eastern side of the hill, and adjoining Kirkcudbright Mines as a separate concern; large quantities of ore have been found in this sett at a shallow depth, as well as at the Black Craig, and I think it worthy of spirited exploration, and more than probable it would be found a profitable speculation.

BODMIN CONSOLS.—The 13 fm. level north continues to improve—it seems to have taken a regular course. I have some splendid stones of lead, which I have just dug out of the level—I believe they are very rich for silver; the lode is large, containing branches of galena, worth at present 15*l.* to 20*l.* per fm. I conceive as this level gets under the northern shoot of ore ground, which is more than 50 fms. in extent, it will prove very productive.

BODMIN WHEAL MARY CONSOLS.—No. 1 lode in the winze is underlaying 40°, which gives 1 fm. more to drive in the cross-cut north to cut this lode at the 10 fm. level; No. 3, at the 10 fm. level, as last reported; No. 4, at the 10 fm. level, much improved; the western winze from this lode at the adit is holed to this level—the men are now securing it. In the eastern winze the orey part of the lode is 2 ft. wide, with a leader of 14 inches wide, nearly solid yellow ore. The engineer is making good progress with the large engine. The bob is up, and the cylinder will be shortly fixed.

BORRINGDON PARK.—Our end is looking much better than when last reported; the lode is much firmer, and not so much mundic in it. There is so much water coming from the back of the level, that I shall be obliged to get sheet-iron for the men to work under.

BRYN-ARIAN.—We have no alteration worth noticing since last report. The lode in the 10 fm. level west is large, with small branches of ore; the stope in the back of the same level is yielding 12 cwts. of ore per fm. The pumps are not yet arrived.

CARTHEW CONSOLS.—You may expect, by Wednesday next (Feb. 5), the engine-shaft will be down to the 85 fathom level, the lode in which shows very well and the ground easy. A small cross-course has this week hove the lode in the north end of the 75 fm. level about 4 feet to the west, where it is again found very good in copper; the lode in the south end in this level is much as it has been for some time past, yielding very fine stones of lead and copper. The lode in the 65 fm. level end south has a very promising appearance, yielding some good work. The tribute setting for February and March was held on Saturday last (Jan. 25), when we set two new pitches in the bottom of the 65 north, at 8*s.* in 1*l.* for copper, and 4*l.* per ton for lead; and if they were to set now, from their improved appearances, they would set at half that tribute, which would be a very remunerative price; the appearances of the pitches throughout were never so good as at present. Consequent on the amount of attle (which it was impossible to prevent) accumulated in the 48 and 65 fathoms levels middle shaft, caused by the sinking it from the former, and rising it from the latter, we have not been able for a month past to haul any work from these places, which rendered it necessary to put the sampling of the lead off at least another week. On Monday next (Feb. 3) we shall, having cleared all the attle, commence hauling work.

DEVON AND COURTENAY.—Since my last weekly report, we have taken down the lode in the 40 rise; it is about 2 feet wide, and will produce 1½ tons of copper ore to the fm., of excellent quality. We are now dressing the lode; the hanging side is coated with black ore, which leaves no doubt of its being equally good. The ground in the 60 end west is not so favourable for driving as last reported, but the ground in the east end in the 60 is easier than it was for driving; I have set the end to drive at one-third less than we were paying before, I have put a pare of men to drive west in the 30 fm. level, at 90*s.* per fm., and hope soon to have a course of ore, as our rise in the 40 is only 15 fms. further west than this end.

EAST BALLESWIDDEN.—We are getting round our work for the wheel as fast as we can. Having had such a quantity of rain, we have not done so much work as I could wish; however, I expect to get on well this month. The iron axle is cast, and I expect to have it on the mine next week.

— *Feb.* 3.—In our last report, I stated that we had laid some of the ground timbers for the wheel; but this day I can inform you that our framework is nearly all in, and the sawyers, carpenters, the foremen, and the smiths, are going on as fast as they can with the work. We have four men bringing the water to the wheel; they have made good 60 fms. of the same, and are still going on with all speed. If reports are correct, we shall have a good pitch to set on tribute before we have forked the water to the bottom of the shaft.

EAST CROWNDALE.—Copy of joint report, dated Jan. 25:—During the past month the prospects of the mine have undergone an important change for the better. In driving the 40 fm. level, we have gone through a very rich bunch of tin for 5 feet in length; in stripping down the foot-wall we find the bunch increases in length, and should say the value of the lode we have taken away has been worth at least 120*l.* per fathom. After going through this bunch the lode became poor: we are glad to say this continued but a short distance (say, about 7 or 8 feet), having, in the last 7 feet driving, had a gradual improvement, and the end is worth 10*l.* per fathom. The winze sinking below the 28 fm. level will, in the course of a week, be holed to the 40, just over the rich bunch of tin, when we shall have good ventilation, of which the mine is much in want. We then intend to place six additional men in the back of the 40, to stope away the ground laid open in driving, and likewise to put down a winze with four men on the rich tin ground; at the same time, we shall drive the 50 fm. level east towards it. We hope this bottom level will lay open as fair ground as we have gone through in the 40, and, with the present price of tin, there is no doubt on our minds but the mine will become a profitable one. We do not propose to go down with the shaft at present, but wait to see what the 50 will do for us first. We are getting on with the sampling of Nov. and Dec. ores satisfactorily, and shall be able to say in another week what the quantity will be.

— *Feb.* 4.—I have this day carefully examined the bunch of tin going down in the bottom of the 40 fm. level, east of middle shaft, and find it extending both in length and breadth, and rich in tin; the present end (40) has improved in character; the lode is again well-defined, and producing some tin. No lode taken down in the 50 since last reported; a good leader of tin on the foot-wall, about 6 in. wide, which will be taken down 12 the course of a day or two.

— *Feb.* 6.—I am at this moment come up from the mine, and am glad to inform you that the bunch of tin continues to lengthen and grow in size, but is not quite so rich in quality; but, in the meantime, is worth quite as much per fm. The 40 has, in the present end, a leader 4 inches wide, almost pure black tin. The lode in the 50 will be taken down between this and Saturday, when you shall hear the results. The specimen shall be forwarded, either the one in the count-house, or a better.

EAST SHARP TOR.—I am glad to say the water is reduced from 15 to 11 strokes per minute in Hitchins' shaft, and the men resumed the sinking on the 23d Jan. I have no doubt but that in two days more we shall keep the water by working nine strokes per minute.

— *Feb.* 5.—The shaftmen have been engaged since my last cutting ground for cistern plat, to receive a 10-in. plunger-lift, which will, when fixed, keep the water under command very well; the water, although very quick at present, is abated two strokes per minute since my last.

EAST TAMAR.—The following is a statement of the operations during the last month, and report on the present state of the mine:—The 70 fathom level, north of Furzehill shaft, has been extended 7 fms. 1 ft. 6 in.; the lode, on an average, has yielded 6 to 7 cwts. of ore per fm., and opened ground that will set at a moderate tribute: in the present end it is 2½ ft. wide, composed of fluor-spar and lead ore, to the extent of 6 cwts. per fm. The 60 fm. level north has been driven 4 fms. 4 ft. 6 in.; the lode, on an average, yielding 7 cwts. of ore per fathom; at present the lode is 3 ft. wide, more easy for driving, and worth the same quantity of ore per fathom; we have commenced sinking a winze a few fathoms behind the end, which will lay open a good run of profitable ground, and ventilate the 70 fm. level; the tributers continue to rise in the back of this level, and there is no probability of holing to the old workings for some time, as their pitch is dry, and several holes have been put up to prove the ground, and ascertain if there be any house of water immediately above. The 60 south has been extended 3 fms, on the course of the lode, which has been but slightly productive; at present it is 2 ft. wide, composed of gossan and fluor-spar, containing some very good stones of ore, with every prospect of improving; this end is now passed under Caroline's shaft, and although the back of the level is letting down a good deal of water, it does not drain the shaft sufficiently to enable the men to continue to sink it. In the 26 fm. level, north of Church-lane shaft, the lode is 3 ft. wide, composed of gossan and fluor-spar, carrying about 6 cwts. of ore per fm. Owing to the late heavy rains, the water has risen in Gullett's shaft to the 26 fathom level, and, consequently, prevents all operations below it for the present. Our settings, therefore, for the current month are on a limited scale, but a short period of dry weather will enable us to resume all former operations. The tribute department remains without material alteration, and it is satisfactory to observe, that notwithstanding the hinderances caused by the late rainy weather, both underground and at surface, our late sampling is only 2 tons less than the previous one. The last month has tested our engine and pitwork severely. Furzehill has proved to be equal to our requirements in every respect, but at Gullett's we require larger pitwork for such unusually wet weather, which tells severely against a mine with so long a run of open ground at surface.

EAST WHEAL GEORGE.—The cross-cut in the 23 fathom level is driven south 11 ft., the ground in which is composed of killas and spar—it is letting down pretty much water. The ground in the 12 fm. level east is without alteration; here we are leaving the lode to stand for the present, until we extend the level further east, when we shall cut through it; during the past week we have broken some good stones of ore on the north wall. The stopes in the back of the 12 fm. level, west of engine-shaft, are producing fine work, still worth 20*l.* per fm.; this cannot be expected to continue much longer in the back, as we are getting very near the gossan—in fact, we have already, in one place.

EAST WHEAL JOSIAH.—The lode in the adit end south is large, and of a promising character. We are still carrying about 3½ ft. of the western part, underlaying east about 18 in. in a fathom, with a very pretty white killas footwall, but on the eastern side of the level the ground is very soft and also heavy; consequently we are obliged to go back and new timber it from 7 to 8 fms. in length, to make it secure to work in—present price for driving, 55*s.* per fm.

EAST WHEAL REETH.—We are fast clearing up the shaft, and it appears as if we were near a level, as the ground is opening as if a plat was cut near us. I have been underground, and as I got to the level, the men had that moment blasted a hole, and I found on inspection the lode appears to be nearly as large as the end which was last discovered. The granite appears to be cut out by a head, and it contains spar and mundic; I broke a small stone or two, and tried it, when it produced a good sample of tin, which I send you, but I cannot tell you anything further about it till we have opened more of the ground; at all events, it appears to be a fair discovery, and I hope we are getting into the tin ground before we expected.

EAST WHEAL RUSSELL.—Since last report we have done but little at Hitchins's engine-shaft, as the water has been so quick. We shall be obliged to wait until our engine is ready to work, which I think it will be now very shortly—say, in eight or ten days from this, should not the weather occasion further delay. We have put the shaftmen to clear the adit level east of the shaft; it has been cleared 9 fms.—the lode in which is looking equally splendid. We have also driven south 2 fms. on the lode, which also presents the same general character, although somewhat firmer in its composition.

ESGAIR LLEE.—Our pay and setting day was on the 1st Feb., the following is an account of the latter:—A cross-cut, north of the deep adit, by six men, 3 fms., or through the lode, at 3*l.* 10*s.* per fm. The 12 fm. level, east of Morgan's winze, on the caunter lode, by six men, 4 fms., or the month, at 4*l.* per fm.; the lode in this level, during the last 3 or 4 fms. in driving, has been very productive, yielding on an average from 20 to 30 cwts. of ore per fm., but at present is not looking quite as well in the present end, but we think the failure to be only a partial one. To stope in the back of the deep adit level, east of Owen's winze, by four men, 8 fms., or the month, at 2*l.* 5*s.* per fm.; ditto, west of same, by four men, 8 fms., or the month, at 2*l.* 10*s.* per fm. The lode in these stopes, on an average, will yield about ¾ ton per fm. A winze to sink below the 12 fm. level, on the caunter lode, by six men, 4 fms., or the month, at 5*l.* per fm.; the lode will yield from 10 to 15 cwts. of ore per fm. To stope in the back of the 12 fm. level, west of Morgan's winze, by four men, 8 fms., or the month, at 2*l.* 5*s.* per fathom; ditto, east of Morgan's winze, by six men, 8 fms., or the month, at 2*l.* 10*s.* per fm. The lode in these stopes, on an average, will yield about ¾ ton per fm. We have suspended for the present the deep adit east of Morgan's winze, and put the men to drive north, in order to cut the north wall of the lode; we can see it for 16 ft. wide, but as yet we are not through the lode, and at the level above this part of the lode has been most productive. The last fall of snow, followed by severe frost, has put a stop to the dressing.

HEIGNSTON DOWN CONSOLS.—In consequence of the late excessive rains, coupled with some accidents—viz.: breakage of bucket rods, &c., the water is with much difficulty kept under control in the mine, and the driving of the 45 fm. level is considerably impeded thereby; the lode is 3 ft. wide, but not so productive, I regret to say, as when last taken down. The lode in the 35 fathom level is 3 ft. wide, more particularly in the back of the end for about 3 ft. down, and below the bottom of the end is being mixed with gossan of the finest description. The cross-cut towards the south lode continues hard, but of a mineralised character. The working of Hitchins' shaft is also impeded, which is occasioned by the almost incessant rain alluded to; there is no change in the lode to notice since last reported on. The lode in the 35 fm. level, west of said shaft, is 2 ft. wide, composed of gossan and capels, with a small proportion of copper ore.

HOLMBUSH.—The ground in Hitchins's engine-shaft, sinking below the 120 fm. level, is still favourable, and from the setting list you will perceive the price per fathom, bearing in mind that it includes the stoping down of an extra 2 ft. of ground in the western end for plunger pole, &c.; when communicated to the 132 fm. level, at which place we have set a trip-plat (to cut), and to prepare for sinking below this level as fast as possible. The lode in the 132 fm. level, west of the great cross-course, is 2 ft. wide, producing 4 tons of copper ore per fm.; the lode in the stopes in the back of the level is also 2 ft. wide, and it will produce 4 tons of ore per fm. We are clearing out the stuff from the north cross-cut as fast as we can, and afterwards to open east and west of the same, on the branch intersected some time since. The flap-jack lode, in the 120 fm. level, east of the great cross-course, is 18 in. wide, producing stones of copper ore, in moderate ground for exploring; the lode in the rise above this level is 15 in. wide, composed of spar, mundic, peach, and stones of ore, laying open ground that will set at a moderate tribute. We have resumed the driving of the 120 fm. level south on the lead lode by four men, at 3*l.* 10*s.* per fathom; the ground is soft and congenial for mineral, and we expect the lode will improve, and that shortly. In extending the 120 fm. level west of the lead course, on the main copper lode, about 2 fms., we have intersected a branch of the lead lode, which has been wrought on further south, and has produced a fair quantity of lead, and is rich for silver in places; where now cut through it is 1 ft. wide, composed of soft quartz and stones of lead, tribute ground; at present it is in close connection with the copper lode, and after we have opened a few fathoms north and south of the same, we shall be better prepared to state its value. The copper lode, I am sorry to say, has dwindled from 14 to 7 in. wide, against the above-named north and south branch; it will produce 1 ton of copper ore per fm., and we hope it will improve as we proceed westward from the north and south course, which at present has impoverished the copper lode in size and value. The lode in the 100 fm. level, west of Wall's engine-shaft, is 3½ ft. wide, composed of spar and mundic, and stones of copper ore. We have selected six men for the present to prepare for sinking Wall's shaft below the 100 fm. level, and when quite ready for exploring the ground, they will be increased to nine men, to make speed. The flap-jack lode in the 100 fm. level, east of the great cross-course, is 3½ ft. wide, producing 3 tons of ore per fm.; the lode in the eastern winze, sinking below this level, is 3 ft. wide, composed of mundic, spar, and ore, producing about 4 tons of the latter per fm., in the midst of a beautiful light blue and compact clay-slate. The lode in the winze near the cross-course is 15 in. wide, producing stones of ore, and its general character is such that we think every miner would like to see. We sampled last Friday at Calstock Quay 193 tons of copper ore (computed 101, and 92 tons), the assays of which shall be sent you immediately after they have been received.

KESWICK.—At Brandley, the 10 fm. level rise is worth 18 cwts. of lead ore per fm.; the stope in this level is yielding 10 cwts. to the fm. At the salt level four men are cutting away a "horse" of ground, for the better working of the Salt sump. In Old Brandley there is no alteration. At Thornthwaite, we have holed through from the 11 fm. to the 17 fm. level; the ore is looking poor. In the 17 fm. level we have had the men rising to meet the men sinking from the 11 fm. level; ore not looking so well. The bottom level rise is improved. In the bottom level the ore has "nipped out," and we have come into harder ground; but as this has been the case before, we are in hopes that, when there shall be a change in the ground, the ore will come in again.

KIRKCUDBRIGHTSHIRE.—At Stewart's shaft, the lode in the 74 end west is 2 feet wide, with a small branch of ore on the north side, yielding 5 cwts. of lead per fm. The lode in the winze in the bottom of the 62 west is 3 feet wide, with good stones of ore. At Keith's shaft, the lode in the 30 end west is broken up into branches, but we are expecting a better lode soon. At Gilpin's shaft, the lode in the 62 end west is 6 ft. wide, with a fine branch of lead, worth from 10 to 12 cwts. per fm., and fine open ground. The lode in the 50 end west is 3 ft. wide, good stones of lead, and kindly ground. The lode in the 40 end west is 6 ft. wide, with a good branch of ore on the north wall, yielding 10 cwts. of lead per fm.

LLWYNMALEES.—We have this morning communicated the western winze and rise from the 14 fm. level to meet the western winze; the western winze will now be a good drawing shaft for the 14 fm. level, and stopes over, which will be set to-morrow to six men. The 8 fm. level west is more promising than it has been; we have now some ore in it in regular branches, but not at present saving work. The 14 fm. level west improves daily, and looks still better than when last reported. The stopes over the 8 fm. level, from 11 to 20 fms. west of western winze, are not so good as last reported, and will soon be wrought out. The mine is now perfectly clear of water, and the 24 fm. level, from London shaft, will be set to-morrow to 12 men. The engine works much better than I have ever seen it, and consumes less coal. I have had a new fine made from end of boiler to the north side of chimney; this has so increased the draft, that we can now get the steam up in a quarter the time we used to, by consuming 6 cwts. less for 24 hours than usual. The shed in front of boiler has had a good effect also on the fire, and I do not believe there is now the slightest escape of heat. With the dressing we cannot do much more until the new stopes over the 14 fm. level have been a fortnight at work, as the stopes over the 8 fm. level will yield but little more ore.

NANTEOS.—The 40, east of shaft, is 6 feet wide, yielding ⅔ ton of ore per fathom. The 30 east, on south lode, is very promising; it is 8 ft. wide, and now yielding ½ ton of ore per fm. The stopes in these and the 20 fm. levels are turning out from ½ to ⅔ ton per fm. The stopes in Gwalthgoch Mine are yielding 12 cwts. per fm.

NEW COPPER BOTTOM CONSOLS.—We have unexpectedly got into a cross-course in going east, where there is abundance of water; what effect this will have on our great lode we cannot tell, neither have we taken down all the ore part of the lode; if it should continue as good the eastern side of the cross-course as the west, we shall be much pleased.

NORTH WHEAL ROBERT.—Since my last report, we have driven 5 fms. 4 ft. 3 in.—lode improving in size and quality, being 4 ft. big, composed chiefly of spar, mundic, and good stones of ore—we have set the level at 5*l.* per fm., including wheeling and drawing the stuff. I hope to have the open cutting completed on the 8th inst., and then we shall resume sinking Murchison's engine-shaft. We are within 5 ft., and the men are boring a hole to let down the water from the shaft.

PENZANCE CONSOLS.—Since our last report, we have holed the winze through to the 24 fm. level, which has enabled us to set two new pitches on tribute, in good tin ground. In driving our cross-cut south from Carthew's shaft, in the 24 fm. level, we have cut one of our south lodes, from which we have already broken several good stones of tin; but, in the course of a few days, we shall discover more of it, when we shall be better able to give greater information. We shall continue to drive our cross-cut south, as we have several lodes still before us, which we have every reason to think will prove as productive as those already worked on. In our 24 fm. level end west, we have a good lode of tin; this end was stopped a few days ago, but as the winze is now holed, it will enable us to resume it. Our tribute pitches, on the whole, are looking very well, and are likely to produce a good quantity of tin this month.

PEN-Y-BANK AND ERGLODD UNITED.—The lode in the adit level driving east of the cross-cut at Erglodd is the same as last reported, large, with small branches of ore. At Pen-y-Bank shaft we have not yet seen the bottom of the working under the 30 fm. level, but hope to in few days.

ROCKS AND TREVERBYN.—The engineer commenced sinking Gray's shaft to the 50 fm. level on the 3d inst.; this completed, we expect to be in the heart of the richest part of the large lode.

SOUTH TAMAR.—The following is a report on the operations of the past month, and the present state of the mine:—The engine-shaft has been sunk 2 fms. 2 ft., and is now down 9 fms. 5 ft. under the bottom of the 112 fathom level; the lode in the bottom is 4 ft. wide, in favourable ground, and carrying a good branch of lead, worth 16 cwts. of ore per fm. for the length of the shaft. We expect to sink 2½ fms. this month, and then commence driving a 124 fm. level, which, from present appearances, promises to be the most productive and profitable we have hitherto had. The lode in the 112 fm. level end south is 4 ft. wide, with very little underlay, composed of a fine can, easy for driving, and worth on an average 12 cwts. of ore per fm.; in the level above we had the same kind of lode for about 90 fms. in length, and may, therefore, expect the same in this level. The drainage has been extended 8 fms. 1 ft. 6 in. on the course of the lode, and leaving very profitable tribute ground. The 112 north has been extended 5 fms. 3 ft. 6 in.; for the distance, the lode has been generally of a kindly character, but not rich; at present it is better, and worth 6 cwts. of ore per fm. In the 100 end south the lode is 3½ ft. wide, composed of a compact fluor-spar, and producing 4 cwts. of lead per fm.; in the level above, immediately over this end, the lode has become disordered and unproductive, and we expect we are approaching dead ground. The 100 fm. level north is suspended until a winze sinking from the 90 is holed for ventilation, and to open tribute ground. In the 90 end south the lode has been gradually improving during the whole of the past month; it is now full 4 ft. wide, well-defined, with but a very slight underlay, and producing 86 cwts. of ore per fm.; there is no doubt but that we have now reached another shoot of ore, after driving many fathoms in unproductive ground. In the 80 fm. level south the lode has also become better defined, and more settled. The slide is wearing out, and the general character of the lode is highly encouraging—at present it is worth 6 cwts. of rich ore per fm. In the 100 fm. level we have a winze going down a few feet before the 112 end, which we expect to hole this month; the lode in it is worth 12 cwts. of ore per fathom. The winze sinking from the 90 to the 100 fm. level we expect to hole in a fortnight, and that which is sinking from the 100 to the 112 north will be completed by the end of the month. The pitches generally are looking well, and the ground laid open will secure the maintenance of the usual returns. The erection of the new stamps engine is progressing well, and will, I hope, be completed by the end of the present month; and the dressing-floors will, if the weather proves favourable, be so far finished as to enable us to commence stamping at the same time.

SOUTH WHEAL TRELAWNY.—We still continue to drive south on the branch we cut in the eastern cross-cut with six men in the 60 fm. level; the ground continues favourable, but the lode is still in a disordered state. It appears that it will form itself again as we are cutting in; it is chiefly composed of capels, killas, and mundic.

TRELAWNY.—Since our last report we have been busily engaged in fixing the lift in Smith's shaft, and which we hope to get to work to-day. We continue to feel the effects of the almost incessant rains of late, the water having risen to between the 82 and 72 fm. levels, but when the new lift goes to work we expect to get it out again. In the 72 end, north of Trelawny's shaft, the lode is 3 ft. wide, and worth 9*l.* per fathom. At the north mine, in the 55 end, north of Smith's shaft, the lode is 3 ft. wide, and worth 5*l.* per fm. In the 68, north of Trehane, the lode is 1½ ft. wide, still spotted with lead. Our stopes are usually productive. We sold on Friday last two parcels of silver-lead ore, No. 1 crop, computed 100 tons, at 21*l.* 11*s.* 6*d.* per ton; No. 2, common, computed 70 tons, at 2*l.* 11*s.* 6*d.* per ton: both parcels were purchased by T. Somers, Esq.

TRELEIGH CONSOLS.—Christoe Lode: In the 100 fathom level, west of Garden's shaft, the lode is 1 ft. wide, but little ore. In the 90 fm. level, west of ditto, the lode is 2 ft. wide, worth 8*l.* per fm.; in the stopes above this level, west of ditto, the lode is 20 in. wide, worth 14*l.* per fm. The 80 fm. level, west of ditto, is suspended, waiting to see the result of the 70 fm. level. In the 70 fm. level, west of ditto, the lode is 18 in. wide, with stones of ore, and is looking more kindly.—Parent Lode: Parent engine-shaft, below the 52 fm. level, is sinking in the country. The 52 fm. level, east of ditto, is suspended, waiting to see the result of the 30 fm. level. In the 30 fm. level, east of ditto, we are driving through disordered ground.—Middle Lode: In the rise above the 40 fm. level, east of cross-cut, the lode is 15 in. wide, worth 2*l.* per fm.; in the rise above the same level, west of ditto, the lode is 1 ft. wide, with stones of ore. Burgess' shaft is suspended on account of the water.

WARLEGGAN.—I have nothing particular to report, except that I believe we are very near the lode in the north cross-cut; the ground is very much easier, and the end flooded with water—sure indications that we are near a lode. There is very little alteration in the stopes. The stamps have been constantly kept at work throughout the week.

WELLINGTON.—The lode in the 50 fm. level, east of the engine-shaft, is 1 ft. 6 in. wide, composed of spar, mixed with copper ore, but of no value at present. The ground in the cross-cut north on the slide, in this level, is fair for driving. The lode in the 42 fm. level, east of Parcolly shaft, is from 1 to 2 ft. wide, poor; the ground in the cross-cut west of the engine-shaft, in this level, still continues hard. In the western adit we are still driving north, and, in consequence of the continued wet weather, we are driven from the 10 fm. level at the western whim-shaft, both tutwork and tribute; this will keep back our copper sampling for a short time. I am glad to inform you that the ground in the cross-cut in the adit level, towards Fisher's lode, is very much fairer for driving; this, if it holds, will be of great importance, as we cannot sink on the ore discovered in this lode until the water is drained by virtue of this driving. Since the water has driven us from the 7 fm level on the tin lode, we have commenced driving the adit west on it; and here the lode is 20 in. wide, composed of gossan, spar, and spots of copper ore—what we call a promising-looking lode. The water at this time is very much increased. We have the new boiler got into its place, and hope in a fortnight from this time to get it to work.

WEST DOWNS CONSOLS.—The boiler is quite ready, and will be sent from the foundry to the mine this day. It is expected the water will be in fork, and the men again in their places underground, in about a week.

WEST PAR CONSOLS.—At the Vounder, we have now the water out of both shafts, and have set to drive the cross-cuts north and south, to intersect the four lodes, and the level east, at an average price of 22*s.* per fathom. At Sarah's shaft, our work progresses as usual. Some of our tin sold last week for 59*l.* per ton.

WEST PHŒNIX.—We are in full operation about the buildings of the engine-house, &c., and should the weather prove favourable, I have no doubt but that we shall accomplish it in about five weeks from this time, as we have a strong pare of masons and labourers here at work: likewise we are getting on with clearing the old men's adit, or open cutting, very satisfactorily; and I am of opinion that we shall complete it home to the close drivage by the end of this week.

WEST WHEAL JEWEL.—The 70 fm. level, west of Williams's cross-course on Wheal Jewel lode, is worth 7*l.* per fm.—drove last month, 2 fms. Carkeek's winze sinking in bottom of the above level, on same lode, is unproductive—sunk last month, 1 fm. 4 ft. 6 in. The 70 fm. level, west of Hodges's cross-course, on Tolcarne tin lode, is worth 5*l.* per fm.—drove last month, 1 fm. 2 ft. 6 in.; ditto east, on same lode, producing stones of tin—drove last month, 1 fm. 4 ft. The 42 fm. level, east of Quarry shaft, on same lode, drove last month, 1 fm. 4 ft. The rise in the back of 57 fm. level, west of Hodges's cross-course, on same lode, is worth 25*l.* per fm.—rose last month, 1 fm. 6 in. The 42 fm. level, west of Quarry shaft, on Tolcarne lode, drove last month, 1 fm. 2 ft. 6 in.; ditto south, in the 12 fm. level, 1 fm. 1 ft. 6 in. The shallow adit level, west of Tregoning's shaft, on same lode, is worth 6*l.* per fm.—drove last month, 1 fm. 3 ft. 6 in. The cross-cut south in the 30 fm. level, on Williams's cross-course, drove last month, 5 ft. 6 in.; ditto west, on Wheal Jewel lode, in the 30 fm. level, drove last month, 1 fm. 2 ft. The cross-cut south of adit level, on Williams's cross-course, drove last month, 2 fms. 3 ft. The stopes in the back of the 12 fm. level, west of Pryor's winze, on Tolcarne tin lode, are worth 9*l.* per fm.; the stopes in the bottom of the 12 fm. level, on same lode, east of Tregoning's shaft, are worth 27*l.* per fm.; the stopes in the bottom of the above level, west of ditto winze, are worth 22*l.* per fm. These stopes are working on tribute.

WEST WHEAL VIRGIN.—The men who have been sinking the engine-shaft have completed it to 9 fms. under the 9 fm. level, so as to get their prize money: and the best of all is this—we have a good lode of tin to the very bottom of the shaft. I stated, when in London, that we had 25*l.* worth of tin broken; I am glad to inform you that we have now more than 45*l.* worth broken, and all from the last 5 fms. sinking. We shall extend our bottom levels 9 ft. each way, and then fix the lift to the bottom of the shaft, for in a few weeks we must begin to sink our engine-shaft, as there is good tin ground to the very bottom. I should like to sink a fathom or two deeper, if the men will engage to do so, but we have had a deal of rain of late, and being so near the surface, have a great quantity of water. We have two more tin lodes, near the one we are working on, and in the summer we can try them. I want to fix a stamping mill to our wheel, in order to do all our work on the mine.

WHEAL ADAMS.—In the 72 fm. level we have met with the slide of black ground, which divided the lode as it did in the 60 and 50; we have, however, cut through it, and the lode is getting much more productive in the cross-cut westerly; indeed there is every appearance of our soon reaching a large deposit of ore. The rise in the 60 continues to produce 10 cwts. of lead ore to a fm., and the stopes on the quartzose lode will yield 15 cwts. to a fm. The rise in the 50, in the black ground, will produce 5 cwts. of lead per fm. The stopes in the 40, north of the old engine-shaft, are improved, both in the north and south. We have cut the lode at the 40, which is 2 ft. wide, producing saving work. The lode in the 28 is 3 ft. wide, and contains about 12 cwts. of lead ore per fathom. We have discovered a branch of ore in Wood's rise, by the side of the barytes; it is 6 in. wide, composed of lead and copper—saving work. The stamping engine was set at work on Thursday last. At Aller we have cut another east and west branch, or lode, consisting mostly of gossan, containing spots of copper, but no silver.

WHEAL ARTHUR (CALSTOCK).—*Feb.* 2.—I have set another pitch, at 10*s.* in 1*l.*, the taker paying all cost to make the ore marketable. I will send you a sketch of the workings in a few days; but I must go underground, and take a view of the old workings. After driving a few fathoms on the lead lode, I shall see the exact underlay, and will prepare a correct plan of the mine up to the present time.

— *Feb.* 6.—I write with the greatest pleasure, to inform you we have discovered a large lode, producing very fine stones of copper ore, of which I now send you a box of specimens, which we have taken from the lode near the main engine-shaft, 50 fms. under surface, all in maiden ground. I have put four men to work on this lode for a few days, in order to ascertain what it is worth per fm. The whim we are now erecting will be fixed in its proper place, to draw this ore to surface.

WHEAL AUGUSTA.—Our mine is looking well. The sumpmen have completed the shaft-plat, and begun to sink the engine-shaft under the 18 fm. level. We have a good lode of tin in the shaft, 18 in. wide; and in the bottom of this level, west of shaft, we have a fine lode of tin, 4 ft. In the 18 fm. level, west of engine-shaft, we have a lode 4 ft. wide, tinny throughout. We have now 16 miners underground, and expect in a few days to employ six more. The account-house, sampling-house, and smith's shop, are built, and will be covered in on Monday next. We intend to begin stamping our tinstuff next week.

WHEAL BAWDEN.—The rise in the back of the adit level, for whim shaft, is up 10 fms., the lode in which is 1 ft. wide, containing spar, mundic, carbonate of iron, with flookan and killas intermixed, producing in places good spots of silver-lead ore. The shaft will, I hope, be completed in about six weeks from this time, when we shall again push forward the level with all possible speed.

WHEAL CREBOR.—Since my last weekly report there is an important improvement to the west of the great cross-course, west of Randle shaft, in the 54 fm. level. The samples of the ore, ere this, I expect you have received. The value of the lode, as near as can be ascertained, is about 20*l.* per fm. on an average. I am just come up from underground; there is another cross-course underlaying to the east about 4 ft. to the fm., now in the back of the rise, which has disordered the lode at present. The lode is going up under the cross-course to the west of the rise, good for ore. The men have cut through this cross-course to the east end of the rise, and there appears to be an orey lode above it; but there is not sufficient done to say anything of its value, and I could not wait to see the result, for my report to be in time. From the great change that has taken place, both in the lode and strata to the west of the great cross-course, we have every reason to expect, as the different levels are driven into it, that good results will naturally follow. I hope to see the cross-course in the 40 end about the latter part of this, or early part of next month, and a communication from the 54 to the 40 fm. level, to the west of the cross-course, in about six weeks, if nothing unforseen at present prevents it; after which, with the ground being of that soft congenial character, and good ventilation, we can make rapid progress in proving the value of the new ground before us. The other parts of the mine are nearly as last reported. We are hauling a pile of the work from the rise to-day. The eastern part of our mine is looking very encouraging; but I wish you to bear in mind, as we are rising on such a large cross-course, we must expect the lode to be more disordered than if rising some fathoms off. The engine, pitwork, &c., are in good working order.

WHEAL GOLDEN CONSOLS.—At Thorne's shaft, in sinking under the 77 fm. level, the ground is good; the lode is 20 in. wide. producing 16 cwts. of ore per fm.; I am sorry to say, in consequence of the great influx of water, together with the pressure engine not being calculated to keep it, we have done but little in sinking for the past week, therefore no time shall be lost in making necessary preparations to get the flat-rods at work as soon as possible, as the prospects in the bottom of this shaft will fully warrant an outlay in so doing. In the 77 fm. level north the ground is good; the lode is 1 ft. wide, producing 8 cwts. of ore per fathom; in the 77 fm. level south the ground is harder since last reported; the lode is 18 in. wide, producing 4 cwts. of ore per fm. In the 70 fm. level north the ground is good; the lode is 18 in. wide, producing 5 cwts. of ore per fm.; the winze sinking under the 70 fm. level north is communicated with the 77 fm. level. In the stopes in the back of the 77 fm. level south the ground is good; the lode is 2 feet wide, producing 15 cwts. of ore per fm. In sinking a winze under the 60 fm. level north the ground is good; the lode is 1 ft. wide, producing 6 cwts. of ore per fm. At the engine-shaft, in the 70 fm. level, south of cross-cut, the ground is moderate; the lode is 2 ft. 6 in. wide, producing 15 cwts. of ore per fm. At Webb's shaft, in the 60 fm. level south the lode is 3 feet wide, ground moderate, producing 6 cwts. of ore per fm.; in the rise, in the back of the 60 fm. level south, the ground is hard; the lode is 2 ft. wide, but poor for ore. We set on Saturday last nine tribute pitches, varying from 2*l.* 15s. to 7*l.* per ton; four of them in the back of the 70 fm. level would not pay the adventurers so well to stope any longer on tutwork, having taken away all the best of the orey ground.

WHEAL HAMLYN.—As the caunter lode is not looking so favourable going east as further back, and in going west having a very favourable appearance, we are led to believe that the great east and west lode, instead of being north of the adit level, as we first anticipated, to be now to the south, especially as we have a lode 4 ft. wide, with a quantity of water coming from it, 2 ft. of which is very soft; it is a very pretty lode, soft spar and ore. The reason we could not ascertain whether the lode was north or south of the adit was in consequence of not being able to see it at the surface, neither could we get underneath, so as to take the bearings; but we hope now to be right. If this lode is to the south, the adit end must be very near it; however, I may be able to say more about it next week.

WHEAL HARRIS.—We have intersected a cross-course in the 25 fm. level west, about 2 ft. wide, underlaying east about 1 ft. in a fathom; it is composed principally of flookan, spar, &c., consequently no lode seen to the west of it; however, we expect to intersect it again in the course of a day or two; present price for driving, 6*l.* per fm.; in the same level east the lode is about 18 in. wide, composed principally of spar, with good stones of lead and copper ore, and also presenting further improvement; present price for driving, 7*l.* 10s. per fathom.

WHEAL MARY ANN.—There has not been anything done in the 70 fm. level, at Pollard's shaft, since last reported, in consequence of the continued heavy rain. The lode in the 60 fm. level, south of the shaft, is 1½ ft. wide, and worth 7*l.* per fm. The lode in the winze sinking under this level is 2 ft. wide, and worth 11*l.* per fm. The lode in the 50 fm. level, south of the shaft, is 2 ft. wide, and worth 6*l.* per fm. The lode in the winze sinking under this level is 2½ ft. wide, and worth 8*l.* per fm. The lode in the 40 fm. level, south of the shaft, is much as last reported. The lode in the 70 fm. level, south of Barratt's shaft, is 3 ft. wide, and worth 10*l.* per fm. The lode in the winze sinking under the 60 fm. level, south of the shaft, is 2½ ft. wide, and worth 9*l.* per fm. The stopes throughout the mine are usually productive.

WHEAL MARY EMMA.—The lode is larger, and has a better appearance, than when I wrote you last. In our dressing we are getting on as well as we can expect, considering the wind and rain we have every day, and hope to be ready to sample by the end of the week.

WHEAL PENHALE.—In consequence of the great influx of water from surface, which we could not under any circumstances prevent going down, we have not been able to do anything in the 40 fm. level this week, but have engaged the sumpmen in cross-cutting to the caunter lode, about 10 fms. north of the winze in the 30 fm. level, and have in driving 2 fathoms had our expectations verified in cutting it very rich, but we have not yet driven far enough to ascertain its width. This I need not tell you is a very important matter, whereas it confirms our precogitations on the winze, and this lode, which is in whole to surface. This discovery alone, independent of the winze, augments the value of the mine to an incalculable amount. The caunter lode in the winze is as rich as has been at any time reported; the work broke in it to-day, and hauled therefrom, is really cheering. We anticipate being able to commence driving the 40 fathom level end south again on the 3d inst., where we have a good lode, and shall press forward with all vigour to get at the junction of the old and caunter lodes, which is about 11 or 12 fms. ahead. On Jan. 31 we made an attempt to bring to surface a stone of lead, which was broken in the winze the preceding day, about 16 cwts., but in lifting it (such a heavy mass), being so brittle it went in three parts; we have now one stone in the bottom of the winze, about 8 cwts., which we shall endeavour to bring to surface on the 3d inst.

WHEAL PROVIDENCE.—On Saturday, being the setting-day, the following bargains were set:—The adit end east, to four men, at 5*l.* per fm.; the lode is 4 ft. wide, composed of gossan, prian, mundic, and intermixed with lead, and has every appearance of being near a bunch of lead; this end has been driven this month 3 fms. 0 ft. 3 in. The cross-cut south is set to two men, at 5*l.* 10s., the ground being harder; this was driven last month 1 fm. 1 ft. 8 in.; 4 ft. has been driven on a branch gone off the lode west of the whim-shaft, which is of high promise, and greatly enhances the value of the mine. The cross-cut north has been driven 1 fm. 4 ft. 9 in., and in this cross-cut the lode has been cut, and is about 4 ft. wide, composed of spar, prian, and mundic, spotted with yellow copper ore. The walls of the engine-house are up, and the carpenters will commence fixing the beams and girders next week. The smiths' and carpenters' shops are covered in, and everything is progressing satisfactorily. Although the lodes make lead on the backs, they have every appearance (from the abundance of gossan, impregnated with copper ore and mundic) of making a most profitable and lasting mine, and are greatly extolled by all practical mine agents who have seen them; and I hope, ere long, to see the water in fork, when returns can be made.

WHEAL SARAH.—I found things here satisfactorily in progress towards our new exploration. The pumps and materials are taken out of the engine-shaft and Mayhew's, and there are 15 fathoms of 7-inch pumps, and 14 fms. of 8-inch pumps, with their buckets and gearing complete at surface, ready for work. The new shaft is sunk 3 fms. in the bend of the hill, south of the old engine-shaft, and east of Mayhew's; the back of the lode is 5 ft. east of the shaft, and underlying towards it, so that the shaft will intersect it at about the 12 fathom level; there are several branches further east, which were mistaken for the southern channel of the lode, being split up, but our late exploration proves that these are but branches, which appear to underlay towards the main lode, forming a junction with it at the 12, or perhaps 20 fm. level; the lode of which you have seen specimens containing much of the favourable indications attached to lead lodes, the upper part of the lode containing a peculiar crystallisation, stained with the oxides of lead and iron; the killas near the lode, the bearing of which I before described, is of a light brown colour, and compact. The whole length of horizontal rods connected with the steam-engine shaft have been taken down, and a portion used to connect our wheel, a 26-ft. by 4 ft., to our shaft, which is about 45 fms. distant. A 7-inch lift will command our water in the new shaft for some time, and I expect our tribute will effectually prove this portion of the mine, so as to determine about a steam-engine, if necessary, in the ensuing summer. I have regulated the cost, so as not to exceed 50*l.* per month, and we intend to sink the shaft by nine men with all due speed.

WHEAL VINCENT.—We did not sell the tin last week on account of the weather, but we shall take it to the market this week. Mr. A. Murray has been underground, and has dialled the west end. He has now gone further west on business, but will return again in the early part of this week, and report on the mine. I hope the severity of the weather is now over, which will enable us to progress faster than we have done during the past month.

— *Feb.* 6.—The lode in our west end is about 3 ft. wide, good for tin; a little harder since last report; but I hope to get through it again in a few days. Our long bunch of tin is still lengthening as we extend our end west; also the ground in our new engine-shaft is somewhat harder than it has been. I believe it is nothing but a floor; and we shall get through it again shortly.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINING ASSOCIATION:—

Bananal, Nov. 23.—We beg to inform you, that in our adit, north of Wray's, we have intersected another cross vein, of a kindly description, but it does not show a single particle of gold, and 8 or 9 ft. has been driven on it with the same result. The old end is again resumed, and will be continued northward as before, towards the old surface workings—the ground is very favourable for driving. The stopes in the bottom of the 6 fathom level, west of Thomas's, on the Big Pump vein, are just the same as when last reported. The stopes in the bottom of the 14 fm. level, east of Gibson's, on the Big Pump Vein, have been sinking under the shoot, allowing the vein to remain, in order to effect a communication with the stopes in the back of the 24 fm. level; here the vein has not produced any gold for the last 10 days, the men having been put to work on the hanging wall, to assist in holing the ground to the stopes above; this, when accomplished, will very much facilitate the working of both places, by relieving us of the water which now congregates in the bottom of the 14, and ventilate the whole of the stopes between that place and the 24 fm. level. The 24 fm. level driving north, on Thomas's vein, has yielded a particle or two of gold since our last report, and its appearance is more promising, with ground far better for driving than it has hitherto been. We made an attempt to clear up the bottom of Thomas's shaft, but only succeeded in doing so to the depth of about 10 ft. below the 14 fm. level, where we find the water too powerful for our means, and were obliged to abandon it until more ground is opened underneath. One of the main rods in Walker's shaft, having the plunger and bucket set-offs attached to it, broke on Sunday last, which caused the water to rise between the 14 and 7 fm. levels; this, with the breakage of the millar of the iron wheel, and other hindrances, have prevented our doing anything this week below the 14 fm. level. The men are employed in securing the adit and shafts, which very much require repair.

Dec. 3.—We beg to hand you the following report of the mine for the last 10 days, with the measurements for the past month:—The ground in the adit, north of Wray's, continues favourable for driving, and since our last we have intersected another cross vein, but it has not shown any gold; we have also driven south-eastward on the one previously cut, and mentioned in our report of the 23d ult., but being poor, and its direction having turned almost parallel with the former level, we were of opinion that it ought not to be proceeded with further, and accordingly stopped it. Another vein has also been driven on northward, opposite the level from Goldsmid's, but in a short distance its appearance became less encouraging, and we suspended it. The stopes in the bottom of the 6 fm. level, west of Thomas's, on the Big Pump vein, are just the same as when last reported, producing only coarse work for the stamps. The water being in below the 14 fm. level, we have again resumed the working of the stopes north of Thomas's shaft, on Thomas's vein, between the 7 and 14 fm. levels, which have produced a little work for the washing-house, besides yielding stuff for the stampers. We are continuing to repair the adit and other places requiring it, and have commenced putting in the shaft-rods for the new 42-ft. wheel, fixing catches, stays, &c., and are doing every thing in our power to get both wheels ready to work at the same time, which we hope will not exceed 8 or 10 days.

Measurements for November.

	Fms.	ft.	in.
Adit level north of Wray's	13	0	0
Cross vein south-eastward	3	2	6
Adit north of Wray's, on a vein opposite the level from Goldsmid's	1	3	0

The measurement of the 24 fm. level, north of Thomas's vein, shall be given at the foot of the first report after the water is in fork.

Gold Report.

	Lbs.	oz	dwt.	grs.
Produce from Gongo, from 13th Nov. to 2d Dec.	6	6	13	0
„ Bananal, from „ to „	3	6	3	0
Together ... *Lbs.*	10	0	16	0
From 1st July to 2d December—Gongo	59	11	17	0
„ „ Banamal	85	7	15	0
Total ... *Lbs.*	145	7	12	0

CHIEF COMMISSIONER'S REPORT.

Dec. 3.—From the repeated breakages of the milliar of the iron wheel, I have determined not to bring another on that principle, as it cannot be made strong enough, but knowing there were some strong milliars at Cocaes out of use, and made on the old plan, I applied to the chief commissioner there, and succeeded in obtaining a crank and milliar by purchase. We are now fixing it to the wheel, and hope that before I have the pleasure of writing to you again we shall have the damage repaired and this machine again at work; and from the milliar and crank now fixing being proved to be good, having worked in a very powerful wheel for some years, I have great hopes that we shall not again be troubled with a similar breakage. We are getting on very fast with Gibson's new machinery. You are already aware that the wheel has been finished, and I hope that in about 10 days this powerful engine will also be set to work—immediately after which we shall proceed to sink for another level (the 34). In consequence of the water being in, we have been unable to do anything below the 14 fm. level, and our produce is, therefore, very little; a small quantity for the wash-house has been obtained from Thomas's vein, below the 7 and 14 fm. levels, but it was not rich, having only yielded 1 oz. 19 dwts. of gold. Favourable symptoms continue to present themselves in the ground to the north of Wray's shaft, and gold has been seen in some of the stones, but we have not yet made any discovery of consequence. We are washing all the jacotinga we send to the surface, but hitherto have only obtained from it a few particles of gold on the skins. The appearances altogether are very encouraging in this part of the mine. All our works now on hand continue to go on with great regularity, and our establishment is healthy, and in other respects every thing I can reasonably wish for.

GONGO SOCO.—On my visiting this place last week, I was much pleased with the progress made in the different works. The tunnel is now, to all appearance, perfectly secure, and unless some parts of the old mine below crush together, and destroy the foundation, scarcely any more timber will be required for several months to come. Our works are now open to daylight, and we have a stope of jacotinga from the bottom of the tunnel to the surface, or a height of about 14 fms. We are continually discovering portions of the old mine, and as our operations are being carried on in that part of the mine which produced the greatest riches, I look forward with sanguine hope to an improved produce. All possible dispatch is being made in the erection of Joinville's stamps (30 heads), which we shall be able to supply with full work at a very trifling extra expense. In a very short time Gongo will be on a very economical plan of working, and a very small produce per ton of jacotinga will pay the expenses.

NATIONAL BRAZILIAN MINING ASSOCIATION:—

Cuiaba, Nov. 26.—The Serrotte lode, which we are now working on, is not like some lodes that I have seen, that would preclude the best miner to give an estimate on, but this is sure and productive from top to bottom. Our returns are as per memorandum at foot, and I trust will be more than double per next advices.

Cocaes, Dec. 2.—Since the date of the last report 10 borers have been employed by day at the backs above the inclined plane, where very favourable indications have been daily observed, but hitherto there has been no improvement at the stamps.

Cuiaba produce, from 7th to 26th November ... *Mks.*	7	5	5	69
Cocaes produce, from 14th Nov. to 2d Dec. ...	3	0	3	9
Together ... *Mks.*	10	1	6	6

LINARES MINES.—The following has been received from Mr. H. Thomas:

Linares, Jan. 25.—This being the last Saturday in January, we have measured and reset as described in the following remarks.—The engine-shaft, which was commenced on the 10th, to sink under the fork which we found below the 31 fm. level, has been sunk 11 feet (English), and I am glad to say that this work is progressing very favourably, the ground offering advantages of joints, &c., more than we had expected. The cross-cut driving from the 45, to get under this shaft, has been driven 2 fms. 5 ft. 2 in., and is reset at 6*l.* per fm. to two Englishmen, with Spanish labourers. There are 16 ft. more to drive in this cross-cut to get under the centre of the shaft. Wilson's shaft has been sunk in January 2 fms. 3 ft., having been for that period in a good lode, and now looking better than before, being now worth full 5 tons per fm. This shaft is now down under the 45 fm. level 4 fms. 5 ft., and we have re-set it to three Englishmen, they employing Spanish labourers, at the same price as before—viz.: 1300 reals per fm., and ½ real per arroba for lead, &c. The 55 fm. level, driving west of San Anton winze, has been driven in January 3 fms. 3 ft. 2 in., and is now extended altogether west of the winze, 3 fms. 1 ft. 2 in., leaving about 12½ fms. to drive to get under Wilson's shaft. This level has been driven during the past month in a good lode, varying from 2 to 4 tons per fm., and being at present worth 4 tons per fm. Shaw's shaft, sinking under the 45, has been sunk in January 4 varas 1 ft. 8 in., and is now down 7 varas 1 ft. 8 in.; it is in a large and rather hard lode, mostly composed of calcareous spar, and at present with very little lead; it is re-set to sink by six men, at 450 reals per vara. The cross-cut driving from the 44, to hole San Juan shaft, has not yet been taken at our price, but I have no doubt of this work also going on well, and being soon completed, when we shall be able to open the western part of the mine, on both the lodes. Of our tribute pitches, I may say that they have turned out well during the past month, and we have this day re-set them at moderate rates. Speaking generally, I may say that the mine is improving, as we are thus early in our operations opening a great deal of valuable orey ground, to replace what we are taking away from the reserves left us by the late possessors.

Account of ore in stock:—Jan. 18, at Linares, 281 tons 7 cwts.; weighed in Jan. 25, 24 tons 15 cwts.=306 tons 2 cwts.—sent for shipment, 27 tons 2 cwts.: remaining at Linares, 279 tons; at Seville, 128 tons 13 cwts.; at Malaga, 59 tons; on board ship 43 tons 8 cwts.: total, 510 tons 1 cwt.

ST. JOHN DEL REY MINING COMPANY:—

Morro Velho, Nov. 28.—Gold extracted to date, 14,700 oits., from 783·24 cubic feet of sand (result of 20 days' stamping), yielding 18·77 oits. per cubic foot. Stamps working 27 days, average 93·79 heads. The supply of stone continues very abundant, but the quality of that coming from the Bahu Mine is, I am sorry to say, very inferior. This is the consequence of the resolution already stated to you, of turning our shaft, pitworks, and inclined plane to the south, to follow the lode, which has turned off in that direction, and during which operation we have been obliged to take down immense quantities of inferior stone, or killas. This will still continue, perhaps, for about 10 days more, after which, however, during almost the whole of December, we shall be compensated for this long-continued state of depression, by substituting for the killas, which has latterly overwhelmed our floors, the superior lode which is now being laid open.

Arrastres.—During a considerable time past I have been occupied, as you are aware, in following up a course of preliminary trials with the arrastre I had constructed for that purpose; and though we have been sadly interrupted and interfered with in these trials, in consequence of the arrastre works being connected and moved by the wheel of the saw-mill, and consequently dependent on finding it from time to time unoccupied by its more legitimate business, still I have seen enough to be enabled to report to you, that on the improved plan to which we have now brought it, it is likely to answer extremely well; it is, therefore, my intention, in the early part of next year, after the new stamps shall be fairly at work, to turn my attention to the erection of 12 arrastres, with their accompanying wheels; and, as a preliminary measure, I am now having the requisite surveys and levels prepared, to see how the sand for the arrastres and the water for the wheels can be brought to the appointed locality—a distance from the mine not much under half a mile. The results from various experiments show, that in 24 hours we obtain from one arrastre 4, 5, and occasionally as high as 8 oits. of gold.

New Stamps.—No exertion is spared to push forward these stamps; and in justice I am bound to say, that our head mechanic, John Rouse, is indefatigable. The railway from Hurry's inclined plane, new spalling floor, the new stamps, the great masonry works, the passes, the roofs—all are being pushed on with unceasing activity, and I begin once more to hope that we shall get to work, if not by the 1st, at all events very early in January.

UNITED MEXICAN MINING ASSOCIATION:—

Guanuaxato, Nov. 29 *and Dec.* 30.—MINE OF RAYAS.—The returns for this mine were for November, $43,716 7 1; and December, $33,126 4 0.

MINA GRANDE.—I am happy to say that this mine is already in progress, having cut a body of the vein of 3½ varas wide of ore, of 10 marcs per monton; the produce, of course, is small, but the prospects are, that in less than three months, it will not only cover all its corresponding expenses, but show a small profit. Thus far we have had a great deal of broken ground to deal with, which it was, and is still, necessary to secure before we can make the productive points yield their produce.

MINE OF JESUS MARIA Y JOSE.—The speculative works are being carried on with all practicable activity, and I hope soon to be in a position to report the result of one or more of them.

MINE OF TRINIDAD.—The same observations are applicable to this mine as for the foregoing.

MINE OF ALDANA.—The speculative work in the cross-cut of Santo Toribio has been continued throughout the month, but without any productive or cheering result; it will, therefore, be a matter of grave consideration as to whether, when the lower wall of the vein shall have been reached, it will be expedient to continue the exploration of the upper wall to the north-west, as suggested by Mr. Parkman in his report, or suspend all active operations for the present.

MINE OF PROMONTORIO.—The working of this mine has remained in a state of suspension during the month, awaiting the completion of the existing engagement on the part of the owners to deliver to the company the adjoining tract of virgin ground specified in the contract of Avio.—J. N. SHOOLBRED.

The following is a Report on the State of the Workings in the Mines, dated November 25:—

RAYAS—*Buscones.*—Regarding those points in the mine in which this class of workmen are employed, we have nothing worthy of attention to remark. The ores produced continue to be well paid.

Frente de San Cristobal.—This work has advanced 10·20 varas, in poor vein.

Crucero de Santo Toribio.—This is a cross-cut towards the upper wall of the vein, commenced in the south eastern extremity of the level of the same name; 8·41 varas have been driven without meeting with ore. A few more varas will be sufficient for the object proposed—viz., not to leave any branches of the vein near at hand unexplored.

Workings in Ore.—The workings going upwards—viz., the contra cielos de La Purisima, and Jesus—are in poor ore. The workings of Santa Isabel and San Diego, going to the south-east under Santo Toribio level, are poor, but in the principal pozo, and against the lower wall, some ore has appeared, which promises to be abundant. During the month some rich ore appeared in Santa Rosalia, a level to the north-west of San Cristobal, but it has declined very much in the last few days. The average number of hemmientas employed has continued the same as in last month, and the produce of dressed ore remitted to the haciendas amounts to 4·300 cargas.

ALDANA.—The level of Santo Toribio was continued 8·99 varas in the direction mentioned last month, and having reached the upper wall of the vein, was continued along the same 3·04 varas, and, not having met with ore as we had expected, the work has been suspended for the present, and the continuation of the original cross-cut of Santo Toribio has been resumed, with the intention of driving entirely through the vein, which it will be recollected has not been done, either in this cross-cut or that of San Diego; 2·06 varas were driven in the past week. The level of San Diego, after driving 6·59 varas, has been suspended, with a view to the reduction of expenses. No material change had taken place in the appearance of the vein in this end, up to the date of its suspension.

PROMONTORIO.—The cross-cut of Santa Catalina, having advanced 7·02 varas without any change, has been suspended. In the points worked by buscones there has been no material improvement.

MINE OF JESUS MARIA.—The cross-cut of San Ignacio has advanced 8·10 varas in hard rock, without any indications of vein. In the meantime, the cross-cut from the mine has advanced 6·55 varas, without any change worthy remark.

LA TRINIDAD.—The work being driven from the mine to communicate with the shaft is called San Francisco, and has advanced 8·67 varas. There has been no change worthy remark. The cross-cut from the shaft has advanced 9·60 varas in rock harder than is usual in this district, but with some indications of the proximity of the vein. The surface works are nearly concluded, and, although on a humble scale, will serve our purpose, until such time as a trial of the vein may be made.

MINA GRANDE.—In last month it was mentioned that we had taken up the continuation of a cross-cut called San Luis; this has advanced 10·65 varas, and has cut through ore of a fair quality, of about 3½ varas in width; there is some doubt whether is the principal or an intermediate vein. The cleaning of the Guadalupe shaft has been concluded, and a trial of the ore in the bottom of the same has been made. The ore is narrow, and the work tollsome and hazardous, so that we have determined to employ the workmen in other points. The Pozo de La Bomba has been sunk 10·55 varas, and having attained the proposed depth, the work has been turned to the south, and along the upper wall of the same towards the arrastre shaft. The arrastre (inclined shaft) has been sunk 8 varas, and will next week change its direction to the north to meet the level coming from the Bomba; from this level a cross-cut into the vein will be driven. Next week it is purposed to open works on the ore cut in San Luis; and for next month I anticipate the pleasure of being able to report a respectable extraction.—SAMUEL PAUL PARKMAN.

The following Report has also been received, dated Dec. 24:—

RAYAS.—*Buscones.*—In such portions of the mine as are being worked by buscones, no discoveries have been made that promises any durable increase of produce. The ore obtained continues to be well paid.

Frente de San Cristobal.—This work has advanced 6·41 varas in a poor vein, with slight indications of ore. The cross-cut of Santo Toribio was driven 3·95 varas; and not meeting with any branches of the vein in ore, the work has been suspended, and the same workmen employed in the continuation of the level of Santo Toribio—to the south-east, in which direction 2·40 varas have been driven; in this distance some stones of good ore have been found; and, in the hope that the vein may improve downwards, we are now sinking a pozo. Among the workings in ore, the pozo of Santa Isabel is at present the most productive, although the ore is of a low ley. In this pozo, which is below the level of Santo Toribio, the vein is more productive than in the above-mentioned level. The mass of ore is found against the lower wall, and of that class which has marked the points in this portion of the mine, where the ore has been most abundant. During the month, there has been no recurrence of the bunches of good ore heretofore found in the vicinity of Santa Rosalia and San Cristobal. The workings going upwards—viz., La Purissima and Jesus—are poor, and of no speculative interest, as they must in a short distance communicate with workings of the Promontorio. The number of barmen employed has been 77 by day and 62 by night; and the produce of dressed ore remitted to the haciendas is 3200 cargas.

ALDANA.—In this mine the speculation of the vein is limited to the cross-cut of Santo Toribio, in which, during the month, 11·24 varas have been driven without obtaining ore, or reaching the lower wall of the vein. It is a matter of regret that the trial of this noble vein should be left to the slow progress of a single work; and, although I have been as much disappointed as any one in not having found, ere now, a deposit of ore; yet reflecting we have only explored about 60 varas along the vein, it appears to me too soon, and too limited the trial we have made of the mine, to justify us in doubting of the final success of the speculation. My principal hopes are in following the upper wall of the mine to the north-west.

MINE OF JESUS MARIA.—The cross-cut of San Ignacio, from the shaft towards the vein, has advanced 9·08 varas in hard rock, without any indications of vein near at hand. The cross cut from the mine, which is also going towards the principal vein, has advanced 8·84 varas without any notable change.

LA TRINIDAD.—The working called San Francisco has advanced 7·08 varas. The ultimate object of this work is to effect a communication with the cross-cut being driven from the shaft; but, in its progress, it will also intersect any division of the vein that may branch off into the lower wall. The cross-cut from the shaft towards the vein has advanced 8·40 varas, and has cut what appears to be an upper portion of the vein, but with a slight difference in the dip. It is very poor; and, except in the formality of its walls, is hardly recognisable as a true vein.

MINA GRANDE.—During the present month frentes have been opened to the north and south, in San Luis; that to the north has advanced 6 46 varas, in the last two varas of which the ore has declined; the frente to the south has advanced 7·20 varas, and the ore continues good in the extreme end. We have now opened about 14 varas in length along the vein, in fair ore, and have reason to hope that it may be still further extended towards the south, and, therefore, afford space for opening one or more pozos. In the pozo of La Bomba a frente was opened to the south, and at 6·20 varas communicated with an old work, which contained a quantity of water, sufficient to employ us during the greater part of the month. We have in the last week driven 4·70 varas in the opposite direction to the north east, and are now again driving down. In the Pozo del Arrastre, after driving 2·70 varas, the work was arrested in its progress, by water coming from the old workings; but we have again resumed sinking, and hope in the month to get deep enough in this, and the pozo de la Bombes, to leave all the old workings above. The interruption we have met with here has prevented us from improving the produce of the mine as I had anticipated last month. The 229 cargas of dressed ore remitted to the haciendas are from San Luis, and it is hoped this point may give more ore in the month now commencing. The average ley of this ore may be estimated at 13 marcs per monton, with a good ley of gold.—SAMUEL PAUL PARKMAN.

THE AUSTRALIAN MINING COMPANY.

An extraordinary general meeting, called upon the requisition of certain of the shareholders, was held at the offices, Adelaide-place, London-Bridge, on Monday, CHARLES DOWNES, Esq., in the chair.

The CHAIRMAN said that this was a special meeting, called together by a requisition, in which the board of directors fully concurred; but, before any business was entered upon, he would call on the secretary to read the clause in the Deed of Settlement authorising the present meeting.

The SECRETARY (Mr. Josephs) read the clause referred to, the 17th, by which any five of the shareholders, holding a certain number of shares, may call upon the directors to convene a general meeting for the discussion of any business, except that of the dissolution of the company. The notice of the meeting advertised in the *Mining Journal*, having also been read, the CHAIRMAN called upon any gentleman present who had a proposition to make to come forward and address the meeting, at the same time reminding them that no other business but that mentioned in the advertisement could be brought under the notice of the meeting.

Mr. DAVIS, as one of the requisitionists, could not help expressing the pleasure he felt at finding that the object of the meeting had the concurrence of the directors. There were one or two facts connected with their property that well deserved attention: that property, as they were aware, had cost them nearly 100,000*l.*, while its present value was probably from 45,000*l.* to 50,000*l.*, showing a depreciation of nearly one-half. He would ask, therefore, whether the time had not come to inquire into the causes of this depreciation? It was very possible that it arose from unavoidable causes, and obstacles not to be controlled, which it was most desirable, however, should be fully known. He had no hostile feeling in view, as regards the management; they were all interested in the facts being elicited, in order that it might be ascertained what were the causes that retarded the prosperity of the company. He would move, therefore, that a committee of five shareholders be appointed, with power to examine papers, books, and persons, as might be found necessary. There was nothing unusal in this step, which was one that it was customary to grant under similar circumstances.

Mr. ANDERTON seconded the motion, observing that it was desirable that every shareholder who might feel dissatisfied in any respect with the management, should have the opportunity of expressing his feelings by his vote. He was one of those who were called upon to sign the requisition, and, in doing so, he did not attribute their want of success to any mismanagement on the part of the directors; they must, however, all feel the dreadful depreciation of their property, and he had certainly been disappointed that greater progress had not been made. They were constantly receiving reports from the mines about Horne's and Masterman's lodes, and the rest of the workings, but still the ore did not come; and though these reports were very promising from time to time, the event never turned out as they were led to suppose would be the case. If this state of things was to continue, he should say it would be better to wind-up the company, rather than go on in the peddling, unsatisfactory way they were now doing; they would then know the worst of it, instead of continuing from one year to another without any good results. They were now in no better situation than they were several years ago, and he feared it was not likely they would be. He concluded by seconding the motion for inquiry.

A PROPRIETOR intimated his belief that the want of confidence which existed was partly owing to the fact that the board included among their number a director of the Madrid and Valencia Railway, which was alone sufficient to account for the general dissatisfaction. He hoped the committee would make strict inquiry into their affairs, and particularly with respect to the documents in the Master's office, which, if they could not obtain, he would gladly furnish them with himself. As regards the directors, there may have been some erroneous estimates of expenses, and some errors of judgment, but they were a body of gentlemen deserving the highest confidence—he was satisfied the proposed inquiry would do good. The shareholders had laid out 80,000*l.* for a property which would not now fetch, he thought, above 30,000*l.* There must be some latent causes for this, some reasons which might be ascertained by a rigid investigation.

Mr. ANDERTON complained of the system of withholding despatches, which were not allowed to be read, when they arrived, by the shareholders. He did not know upon what grounds this was done, and, in his opinion, the directors assumed an authority not vested in them. Despatches, for instance, had arrived in May last, and the shareholders were not allowed to see them, and, as a necessary consequence, the property had become depreciated in public estimation. He was entirely in favour of a committee of investigation.

Mr. MASTERMAN (a director) said he augured the best results from this meeting, from the candid and straightforward way in which the proposition for inquiry had been put forward. The company, as they all knew, had begun with the highest hopes of success; but, though the property was now depreciated 50 per cent. in the market, he considered that to be no criterion of its value. Mining property, in many cases, was put up much beyond its real value, and he should be sorry if they supposed that the present nominal price of their shares was a fair test of the value of their property. He was glad that a committee of inquiry was about to be appointed: he would only remind them that

they had no slight labour before them, and he hoped they would go fully into every matter connected with the company. With reference to the reports, they were in constant communication with Major Campbell, and from those despatches they gathered the reports which were placed before the shareholders —they endeavoured to present as fair accounts as they could of their operations. These last, however, fluctuated greatly, as all mining operations invariably did. Sometimes the mines looked well, and masses of ore were in sight, and the accounts were given as they were received; perhaps the next month there was a check, and they had reports stating that the ore had vanished, and that their prospects were less favourable. He was sure that when the proprietor (Mr. Anderton) examined into these things he would come to a different conclusion; he could only say that the whole machinery of a vast mining property was complete, and at their command; and he trusted the committee would calmly address themselves to the task of investigation in every department, private and public, so as to be able to present such a summary of their labours as would be satisfactory to the shareholders, and have more weight than any statement coming from any other quarter. As regards their not publishing all their despatches, he considered they were to be viewed as confidential communications between the directors and their agents, which they must be aware were often of a private nature. They simply claimed the right of selecting such as they deemed proper to be placed before the shareholders. They might as well say that Lord Palmerston was bound to publish the despatches he receives from his agents abroad, as that the directors should publish everything as they received it; and, on this point, therefore, they did not agree with the worthy proprietor. The directors would gladly afford every information in their power, and he could assure them that no one, whether manager, agent, secretary, or any other party, should stand in the way of the prosperity of the company. (Cheers.)

Captain PAGE remarked that the motion for a committee was, in his opinion, rather premature. By the late accounts, they had got the water in fork, and there was stated to be sufficient low priced ores to pay their expenses. They would recollect that they had got 30 miles of surface, and in mining operations, it was not until they had got 50 fathoms below the surface that they could judge of the probable results. He would propose as an amendment that the appointment of a committee be postponed for six months.—The amendment not being seconded, fell to the ground, and the original resolution, on being put by the chairman, was carried unanimously.

Mr. SHEPHERD, after expressing his satisfaction at the ready concurrence of the directors in the proposition, moved that the committee should consist of five gentlemen, whose names he submitted to the meeting, and that three of the number should form a quorum.

A PROPRIETOR made some remarks on the general depreciation the shares had undergone, and was proceeding to comment on the financial prospects, and amount of assets of the company, when he was informed by the chairman that these matters were not under discussion, the business being limited solely to the question as to the appointment of a committee.

Some discussion followed in reference to the members of the proposed committee, and the powers with which they were to be invested; and the solicitor of the company, in reply to a qustion, stated that the committee would have no power to add to their number, but they might call in whatever aid they might require in the course of their investigation. It was ultimately agreed, after their names had been put *seriatim* to the meeting, that the committee should consist of the following gentlemen:—Messrs. R. Davis, Anderton, R. Shepherd, Shears, and Turnley. It was also proposed that the meeting should be adjourned for two months, but it was, we believe, left to the directors to call another general meeting, at the suggestion of the committee, to receive the report to be prepared by them for the shareholders.

Mr. ANDERTON moved a vote of thanks to the chairman and board of directors, and warmly eulogised them for the candid and open statements that had been made, and the ready manner in which they had complied with the wishes of the shareholders.

The CHAIRMAN, in acknowledging the compliment, said it was very gratifying to himself and his brother directors to receive their approval, inasmuch as the only object they had in view was the good of the shareholders. Their attention would be still directed to their interests, and from communications that were now passing between them and their superintendent in Adelaide, he believed there were elements in their undertaking, the development of which will prove of great importance to every shareholder. They had not only the mines, but a great extent of ground also, which by some had been deemed a disadvantage, but from which they were now deriving an annual income. The colony itself was prospering prodigiously, and their property must increase proportionately in value. He thanked them cordially for this mark of their confidence, which he would assure them would never be abused.

The meeting then separated.

WHEAL LANGFORD AND WHEAL BARING UNITED MINING CO.

A general meeting of adventurers was held at Gregory's Hotel, Cheapside, on Thursday, the 6th inst.—STEPHEN BROAD, Esq., in the chair.—The report of the directors, with that of the agents, having been read (which will be given next week), the same were approved, and ordered to be entered on the minutes. The accounts, made up to the 31st Dec., were submitted to the meeting, showing balance in favour of the mine of 744*l.* 4s. 9d. A report from Mr. Arthur Dean on the mine, and the prospects it presents, was read, which, with other matter connected therewith, will appear, with more lengthened reports of the proceedings at the meeting, in our next. Additional members to the committee having been appointed, and thanks given to the chairman, the meeting separated.

HENNOCK SILVER-LEAD MINING COMPANY.

At a highly-respectable meeting of shareholders, held at the offices, Winchester-buildings, City, on the 6th inst.,—JAMES FORSYTH, Esq., in the chair,—the accounts were produced, showing—Receipts as by last statement, 1708*l.* 17s.; arrears received, 292*l.* 13s.; 5s. call, 375*l.*=2376*l.* 10s.—Mine costs, &c., as per last statement, 1652*l.* 1s. 5d.; labour, Sept., Oct., Nov., and Dec., 262*l.* 16s. 2d.; merchants' bills, 257*l.* 18s.10d.; general charges, from 28th Oct., 26*l.* 14s. 9d.; leaving balance in hand, 173*l.* 18s. 10d. The assets are—Cash in hand, 173*l.* 18s. 10d.; ore in stock, 40*l.*; 5s. call made this day, 375*l.*=588*l.* 18s. 10d. The liabilities were—Merchants' bills due, 101*l.* 15s. 3d.; mine costs, January, February, March, and April, 315*l.*; sundries, 40*l.*: leaving balance of assets, 132*l.* 8s. 7d.—Capt. James (the agent) reported—

Since the last general meeting, we have sunk the engine-shaft 1 fm. 4 ft.—making 11 fms. 2 ft. under the 10 fm. level, and completing the contract for 11*l.* We then drove a cross-cut 10 ft. and cut a whim plat, cased and divided down the shaft, cut a cistern-plat, put in bearer and cistern, and fixed a new 11-in. drawing lift, main rods, stays, &c. We have also put in penthouse, put down sinking lift, and sunk 1 fm. under the 20 fm. level. We have sunk the winze 5 fms. and holed to the 20 fm. level, driven north 5 fms. and cut through the great quartzose lode 14 ft. wide. We have since driven 2 fms. 2 ft. north of the cross-cut, by the side of the lode, on the western part. We have also erected a new drawing machine, and connected it with our engine-wheel, and have saved thereby in the three months 12*l.* in horse hire. We have taken out a wheel-pit for a new 18-ft. water-wheel for a crusher, and for drawing up tinstuff. This wheel will take the water after its fall under the engine-wheel—thus using the water twice before we return it to the mill. The masons will finish the walls in a week, if we can have some fine weather. At the November meeting, I stated that I thought we should have a good lode in the 20 fm. level, but in that, to a certain extent, I am disappointed; still the lode has greatly improved in its nature; and I find in driving north there is another lode forming from the branches in the upper levels coming together to the west of the great quartzose lode; and in every sense of the word it has the very same character as the Wheal Exmouth lode (the adjoining mine), just before they cut their present rich lode, which is considered, I believe, by all parties to be the best lead lode in England. It must, however, be borne in mind, that in Exmouth they are 20 fms. deeper than we are at Hennock; and it is the unanimous opinion of every one who has seen Hennock, since we have opened on the lode in the 10 fm. level, that we required only a little more time and money to put us in possession of as rich a mine as our neighbours. I should state there are some good branches of lead in our new discovery.

The financial statement was adopted, and a call of 5s. per share made.—The appointment of Mr. Adam Murray, jun., as inspector of the mine, was confirmed.—The agent's report was deemed satisfactory, and the thanks of the meeting passed to Mr. Channing, of Exeter, for his attention to the interests of the company.

The thanks of the meeting having been awarded the chairman for his efficient services, the shareholders separated, satisfied of the probability that a few more months, and a few more hundreds of pounds, would prove the present favourable opinions to be a more tangible matter-of-fact.

PENVIVIAN TIN AND COPPER MINE.—This mining property is situated in the parish of Lanivet, in Cornwall, adjoining the Tretoil and Tregullon Mines, held for 21 years, at 1-15th dues, to be reduced to 1-18th and 1 per cent. on the returns, after the erection of a second engine. The sett is in length, from east to west on the course of the lodes, about three quarters of a mile, and about the same in breadth from north to south. Five lodes have been discovered, three of copper and two of tin, in a decomposed strata, at the junction of the granite and killas, and from the reports of several practical mining agents, it appears that this property holds out indications of great promise to the adventurers. The proposed capital is 5120*l.*, in 1024 shares, of 5*l.* each, on which a deposit of 2*l.* is to be paid—1*l.* to the proprietors, as remuneration for their cost to the present time, and 1*l.* per share for prosecuting the mine. General meetings of the shareholders are to be held every two months, at which the managing committee will be appointed, calls made if necessary, and the other usual business transacted for the judicious working of the mine.

The lectures on the electric light at the Royal Polytechnic Institution, by Dr. Bachhoffner, still continue to draw crowded audiences, and the lectures on fire and its antagonists, greatly surprise and astonish the visitors of this establishment by their grandure and beauty. A most curious clock is now demonstrated, which has all the appearance of magic, and like all magical delusions, is easily comprehended; it is explained in the great hall of the institution, amongst the other mechanical inventions, and was introduced hereby the President of this Museum, Sir George Cayley, Bart. In appearance it is simply a sheet of glass and a hand, yet this instrument chronicles time accurately

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

At ALLT-Y-CRIB, the lode continues in the deep adit west to yield 2 tons of ore to a fathom; the stopes are also improving; and there is a good lode in the air shaft, about 10 fms. from surface. The 30 tons, sold on the 1st inst., brought 12*l.* 1s. per ton—Messrs. Newton, Keates, and Co., being the purchasers.

At BRONFLOYD, the lode in the western workings will yield 1 ton per fathom with a good bunch of ore, seen some fathoms before us. The deep adit, driving east, is also much improved; and, should the north part of the lode continue equally productive as when last seen, it will be worth 20*l.* per fm. The machinery is in course of erection, and the dressing flooring being prepared as fast as possible.

At CWM DAREN, the lode in the copper level, about 20 fathoms east of the level's mouth, is worth for copper about 6*l.* per fm.; and 50 fms. east of the mouth of the level is worth for lead 15*l.* per fm.

At DAREN, the lode in Francis's adit is worth 20*l.* per fathom.

At CWM SEBON, they are forking the water, which is now in the 50 fm. level In the 40 fm. level the lode is about 4 ft. wide, worth about 20*l.* per fm. As soon as the water is out, large returns will be made.

At the COURT GRANGE MINES, the stopes in the 30 fm. level are yielding about 1 ton per fm. In the 40 fm. level, driving east, the lode is large, and contains a small quantity of ore; ditto west, it is large, and spotted with ore Sold last month 24 tons, at 17*l.* 5s. 6d.—Messrs. Newton, Keates, and Co. being the purchasers.

At BWLCH CONSOLS, the 35 fm. level west will yield 1 ton to a fathom. The 45 west 15 cwts. to a fathom; and the 55, west of Daran's, about 1¼ ton to a fm. Ore sold on the 1st instant, 30 tons, at 14*l.* 14s., to Messrs. Walker, Parker, and Co.

At CAE-GYNON, the adit in stripping down the lode westward is worth 10*l.* per fm. They are now busy in the erection of machinery, dressing apparatus, &c.

At GELLIR-EIRIN, the lode is 14 ft. wide, spotted with lead, and some water coming from the lode.

At TYLLYD, the deepest old adit has been cleared to the old workings. They are now securing the adit eastward; and there is every appearance of there having been a large quantity of lead raised about this spot, and, with a small wheel and crusher, is likely to give good profits again.

At WEST NANT-Y-MWYN, fine stones of ore continue to be found in open cuttings on the veins.—*Goginan, Feb. 5.*

BODMIN WHEAL MARY.—I saw yesterday (Jan. 5), in one of the winzes here a lode worth 30*l.* per fm.—a solid course of yellow ore, that could be excavated and drawn to surface for 2*l.* to 3*l.* per fm.; besides this, there is in the other winzes copper ore discovered worth 10*l.* to 15*l.* per fm. A spirited company have this mine; they are keeping the water at present by a steam-whim engine below the adit, previous to the erection of a 50-in. pumping-engine, the bob of which is already fixed over the shaft. The shaft is 13 fms. below the adit, in a fine compact killas; and the cross-cut opening in the various lodes, to which the winzes from the adit are about being connected, show really a matter of great productiveness. There are about 20 tons of copper at surface ready for market.

BODMIN CONSOLS is one mile due north of the town. The 13 fm. level north cut last Monday morning into a fine course of lead ore, which has continued up to this moment. Last night and this morning stones of galena, of several hundred-weights, were broken down; the level at present may be worth 15*l.* to 20*l.* per fathom, and driving by eight men, at 6*l.* There is quite a stir here, and there is no doubt that these two mines will form the nucleus of a regular mining district.

CAMBORNE CONSOLS.—We have a good course of ore running from the 20 fm level, upon the south entral lode. We shall have ready for the next sampling about 25 tons of ore, which will fetch about 250*l.*, and we shall have a similar sampling from the same end on that day month, with a prospect of a considerable increase in the course of the next six months; our cost being principally for labour, is comparatively trifling, not much exceeding 100*l.* per month.

IN WHEAL VINCENT MINE (Altarnum, Cornwall), important discoveries are making of rich tin ore, in a level carried 10 fms. under the stream works, now in very successful operation by a separate company, and it is expected that the development of this mine will become still more important when the new shaft is sunk to 20 fms., and the lode driven upon.

FAT WORK TIN MINES.—These mines, which have been worked from a very ancient date, are situate in the united parishes of St. Columb and St. Eneder, in the county of Cornwall, about 12 miles from Truro, and the same distance from Bodmin. The prospectus states that large quantities of tin of very superior quality was raised by the ancients, and that the operations were abandoned only for want of efficient machinery to keep down the water. It appears that there are many thousands of "sacks" of tinstuff in the old levels, which, when brought to grass and dressed, are expected to produce from 200 to 350 lbs. of black tin to the 100 sacks. The mine is proposed to be divided into 6144 shares, at 1*l.* each, producing 6144*l.*, the present proprietors being willing to take 1144*l.* as compensation for the work already performed, leaving 5000*l.* as a working capital. In a report by Capt. Thomas Symonds, who has always lived in the neighbourhood, he states it to be his opinion that these mines will turn out a profitable speculation, on the erection of an efficient engine, and a spirited prosecution of the workings.

THE APPLEDORE MINE (silver-lead and copper), situated in St. Ive, Cornwall, is divided into 1024 shares, and will be worked on the Cost-book Principle. The sett, which is about a square mile in extent, is adjacent to Wheal Mary Ann, Trelawny, Venton, and other rich and productive mines. There are reports on the mine of a highly favourable character, from Capt. Osborn, Capt. Hodge, of Wheal Venton, and Mary Ann, and one also from Capt. Dunstan, of West Caradon. In their report the two pursers state that they saw one strong, regular, and well-defined lode, running north and south, 2½ ft. wide, in a stratum very congenial to silver-lead; which lode, by its underlie, falls into a large concave valley, the stratum of which is a soft clay slate, in which our most productive and profitable lead mines exist. Two other lodes have likewise been discovered in this sett. Their conclusion, after a careful inspection, is that few new concerns present more of what is called promising indications than are to be seen at Appledore, and that it holds out considerable promise of making a large and good mine. Capt. Dunstan states that the north and south lodes in this sett are a continuation of the eastern lodes in Bicton, present a fine appearance, and, where opened on the backs, show themselves to be large and well-defined, composed of gossan and quartz, located in soft killas, which is in every respect congenial to the produce of lead. He also confirms the fact of there being an east and west lode, and recommends, preparatory to any permanent operations, that the lodes be opened on the backs throughout the sett, in order that their character and position may be clearly ascertained, and the best spot selected for the commencement of the workings. The sett is granted by W. D. Horndon, Esq., at 1-15th dues; and we observe it stated that two-thirds of the shares have already been apportioned.

WEST WHEAL ROSE SILVER-LEAD MINING COMPANY.—This mine is situate in the parish of St. Cuthbert, near the north coast of Cornwall, and in the same stratum of ground as East Wheal Rose, Penhale, and Wheal Golden. It is divided into 2048 shares, at 3*l.* each, on which a deposit of 2*l.* is to be paid—1*l.* for the purchase of the mine, and 1*l.* for working capital—which, it is expected, will be sufficient to place the mine in a position to pay its costs and realise future dividends. Should the other 1*l.* be required, it is to be had by calls of 10s. per share, made at general meetings. An adit has been driven 20 fms. east on the course of a promising east and west lode, at which point it is intersected by a north and south lode, which has been driven on 15 fathoms north. A rich course of silver-lead has been discovered; 20 fms. further north a pit has been sunk on the same, showing fine stones of silver-lead; and, 10 fms. beyond the lode, still further develops itself in a pit, where the solid ore is 12 in. big. From the reports of two mining agents, this appears to be a highly promising adventure.

WEST WHEAL ABRAHAM.—This sett covers an extent of ground about one mile square, and embraces the formerly well-known mines, Carsize, Maria, Wheal Dolby, and Wheal Mount, from all of which considerable returns have been made, and this district is considered one of the best in Cornwall. This ground has been worked to the depth of 240 fms., and proved highly productive and profitable in tin and copper, from 1814 to 1824. It is proposed to divide the mine into 2000 shares, of 10*l.* each, one-half to be paid on allotment, and conducted on the Cost-book System. A few pares of men are working on tribute, and are said to be doing well, and many of the shares are, consequently, being taken up in Redruth, Camborne, &c. It is said to have been a dividend-paying mine at the time of stoppage, which took place from a misunderstanding among the adventurers; and in the immediate vicinity are the Lewis Mines, Godolphin, Great Work, and Wheal Vor, the latter of which was the largest producing tin mine in Cornwall. It is said that three powerful engines will be necessary, and large stamps machinery, which will be erected without delay.

LINSEED TEA.—This nutritive mucilaginous drink is particularly recommended to persons troubled with coughs, and also in asthmatic and consumptive cases. The following is the most approved method of preparing it:—Take 2 ozs. of liquorice root, split it up fine, and place with 4 ozs. of clean linseed in a jug, which will hold two quarts. Fill up with boiling water, and keep it at the boiling point two hours, stirring it repeatedly; it may be thinned by water if too thick, and a slice or two of lemon may be added if desirable. A tea cup full may be taken several times a day, and is both food and medicine. A quart of boiling water may be poured on the grounds when the first liquor is exhausted, when it will be found little inferior. When off the fire, it should be transferred to a cool place to prevent its turning sour. It is an excellent emulcient drink for diseased lungs, and recommended to miners.

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 7, 1851.

ENGLISH IRON. *a*	*per ton.*	Tile	£83 0 0
Bar, bolt, & square, London	£5 7 6–5 15	Old copper *e*	*per lb.* 8¼*d*
Nail rods	6 0–6 15	Yellow Metal Sheathing	7¼*d* 7¾*d*
Hoops	7 0–7 15	**FOREIGN COPPER.** *f*	
Sheets (singles)	7 12 6–8 5	South American, in bond	77 0–87 0
Bars, at Cardiff & Newport	4 15–4 17 6	**ENGLISH LEAD.** *g*	
Refined metal, Wales*	3 5 0–3 15	Pig	*per ton* 17 10–18
Do. anthracite*	3 10 0	Sheet	18 10–19
Pigs in Wales	3 0 0–3 15	Pipe	19 0 0
Do. do. forge	2 5 0–2 10	Red lead	19 0 0
Do., No. 1, Clyde	*net cash* 2 3 0–2 4	White ditto	24 0 0
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 10 0	Patent shot	20 10 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0	**FOREIGN LEAD.** *h*	
Stirling's Patent } in Glasgow	2 15 0	Spanish, in bond	16 10–17 10
Toughened Pigs } in Wales	3 10–3 15	**ENGLISH TIN.** *i*	
Staffordshire bars, at the works	5 7 6–6 0	Block	*per cwt.* 4 8 0
Rails	4 17 6–5 2 6	Bar	4 9–4 9 6
Chairs (Clyde)	4 0 0	Refined	4 14 0
FOREIGN IRON. *b*		**FOREIGN TIN** *k*	
Swedish	11 10–12 0	Banca, H. C.	4 8 0–4 9
CCND	17 10 0	Ditto, for Export only	—
PSI	—	Straits	4 6 6–4 7
Gourieff	—	**TIN-PLATES.** *l*	
Archangel	—	IC Coke	*per box* 1 8 0–1 8 6
FOREIGN STEEL. *c*		IC Charcoal	1 12 6–1 13 6
Swedish keg	15 0–15 10	IX ditto	1 18 0
Ditto faggot	15 0–15 15	**SPELTER.** *m*	
ENGLISH COPPER. *d*		Plates, warehoused	*per ton* 16 0 0–16 5
Sheets, sheathing, & bolts, *p. lb.*	0 0 9¼	Ditto, to arrive	16 5–16 7 6
Tough cake	*per ton* 84 0 0	**ZINC.** *n*	
		English sheet	*per ton* 21 0–21 10
		QUICKSILVER *o*	*per lb.* 3*s.* 9*d.*

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis.; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

WELCH IRON has assumed a duller appearance this week; several parcels for early specification are offering by speculators at 4*l.* 17s. 6d. for the favorite, and 4*l.* 15s. for the ordinary brands. The makers continue full of orders, and are not disposed to sell at lower prices. The last mail from the United States has again brought considerable orders for rails.

STAFFORDSHIRE IRON is much inquired for; several orders for export are in the market.

SCOTCH PIGS.—A fair amount is doing for the home trade and for America.

SWEDISH IRON.—Nothing to report this week.

SWEDISH STEEL.—A small parcel has been sold for China, from the ship's side, at 14*l.* 15s.—equal to 15*l.* 2s. 6d. landed.

SPELTER.—In the early part of the week a purchase was made of 50 tons, at 16*l.* 5s., holders are now firm at 16*l.* 7s. 6d.——COPPER is in steady demand.

YELLOW METAL SHEATHING.—Owing to a dispute amongst the manufacturers, this article was reduced on the 15th ult. ¼d. per lb.

BRITISH TIN continues in good request for shipment; refined is still very scarce.

FOREIGN TIN has again advanced; several parcels of Banca have changed hands at 88*l.* and 88*l.* 10s.; the article is well held, and as long as English refined continues scarce, will command a high price. Several parcels have been cleared during the week for home consumption—paying the duty of 6*l.* per ton.

LEAD continues in good demand for shipment.

In TIN-PLATES a fair business is doing; they may be quoted at 6d. per box dearer.

LIVERPOOL, FEB. 6.—The demand for manufactured iron is quiet, but prices are well supported.—Rails are still wanted in considerable quantities, and 5*l.* 2s. 6d. to 5*l.* 5s. are the lowest rates at which purchases can now be made.—Scotch pig-iron is in very limited demand, at 42s. 6d. per ton, nett cash, for ordinary brands, free on board, at Glasgow.—American brands command 1s. to 1s. 6d. per ton higher rates.—The stock of tin plates is still light, and shipments, especially to the United States, are large.—Lead, tin, and copper, are in good request, at former rates.

STAFFORDSHIRE.—The *Wolverhampton Herald* of Wednesday says,—"The coal trade throughout this district is looking up, which is in part owing to the increased consumption in the iron trade. The thick coal colliers employed by the British Iron Company and others, in the districts of Corngreves and Netherton, as also those of Brierley-hill distict, employed by Lord Ward, British Iron Company, Mr. J. W. Johnson, and others, struck and turned out during the early part of the last week for a rise of wages, but the greatest part of them returned to their work again on Friday and Saturday. The rate of wages given in these districts (west of Dudley) to the above class of workmen is 3s. and two quarts of beer per day, and one ton of coals per month. We hope the men will wait with a little more patience for the rise of iron expected to take place towards the end of this quarter, which, if established, will give them a better standing and better wages without a strike.—The iron trade continues brisk, and all parties engaged, as pig makers or manufacturers, move in the important game with the greatest caution. Manufacturers decline further orders at present rates, and pigs are only to be had in retail quantities. Holders of ironstone ask higher rates, and are rather disposed to hold a little longer for the good time said to be coming."

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL,
FOR THE FIRST MONTH OF 1850 AND 1851.

Metals.		1850.	1851.	In. in 1850.	Dec. in 1850.
Spelter	*Tons*	68	75	7	—
Copper		497	318	—	179
Iron, British, bars		3662	3039	—	623
" rails		—	285	285	—
Ditto, Foreign		—	—	—	—
Tin-plates	*Boxes*	2083	1240	—	843
Lead	*Tons*	154	548	394	—
Steel		50	3	—	47
Quicksilver	*Bottles*	—	—	—	—

HULL, THURSDAY.—Messrs. T. W. Flint and Co. state that the market for mining shares has been decidedly better in tone than for some weeks past: there is more disposition to invest, especially in dividend-paying mines, and in those approximating to that point. Alfred Consols are worth 16*l.* to 16½*l.*; West Providence, 65*l.* to 66*l.*; Tremaynes, 21*l.* to 21½*l.*; Wellingtons, 15½*l.* to 15¾*l.*; St. Aubyn and Gryll's, 5¼*l.* to 5½*l.*; Trefusis, 17*l.* to 18*l.*; Gustavus, 5¼*l.* to 5¾*l.*; West Tolgus, 5*l.* to 5¼*l.*; Bedfords, 6¼*l.* to 6¾*l.*; and Merllyns, 4*l.* to 4¼*l.* As the public become more acquainted with mining investments, we have no doubt, so long as prudence is exercised in the selection, they will increase in favour. The small amount of calls, and the facilities for looking into the accounts, being favourable points of contrast with railway investments. The Cost-book System is as yet very imperfectly understood by a large mass of people with money at command, and the cessation of railway calls leaves a large amount of money ready to flow into any channel that may be favourably regarded; and there is nothing more likely to get it than well-conducted mining adventures—but it is an essential that they be well-conducted.

MINING APPOINTMENTS DURING FEBRUARY.

10. Wheal Seton account, on the mine.
11. Tywarnhayle account, on the mine.
12. United and other mines sampling.
13. Ticketing at Redruth, Carn Brea, and other mines.
14. North Pool setting; West Caradon and Gonamena pay.
15. Pay at United, Fowey Consols, West Treasury, Nancegollan, and Cook's Kitchen.
17. Condurrow account, on the mine.
18. East Pool account, on the mine.
19. North Roskear and other mines sampling.
20. Ticketing at Redruth, Devon Consols, and other mines.
21. Pay at Wheal Buller and Levant.
22. Pay at Great Consols, Comfort, Treviskey, Tywarnhayle, Agar, West Seton, Pendarves, Wheal Seton, West Alfred, and Copper Bottom; setting at Levant Mine.
25. North Pool account, on the mine.
26. Carn Brea and other mines sampling.
27. Ticketing at Leuderyou's Hotel, Truro—United and other mines.
28. Pay at Carn Brea, Tincroft, North Pool, East Pool, Wheal Ellen, Treleigh, South Tolgus, and Great Wheal Alfred; setting at East Crofty.

GOLD MINES OF NEW GRENADA.—These mines are situated in the province of Antioquia, and consist of deep mines, and those spots where the precious metal is obtained by washing. The most noted localities for the deposits of auriferous sands are those of Sinitabe, Oquendo, Baharona, San Juan, La Vaca, and Rio Dulze. The mines which have been explored, and given the best results are Los Cristales, Juan Criollo, Bolivia, La Clara, El Chuchero, Rumazon, San Jorge, du Porce, La Trinidad, Las Animos, San Francisco, La Constancia, Neuva Companica, El Rio, La Esperanza, Santa Anna, La Martica, Palmichal, El Frontino, Apucario, La Centeno, La Esmeralda, Queuna, El Zancudo, El Retiro, and San Vincente. The three which at present are in profitable course of working are those of Zancudo, at Tiuibe; La Clara, at Amalfi; and Pedrero, on the banks of the River Porce. About 2723 lbs. of the produce has been exported, and 2462 lbs. coined. The gold raised has been calculated to be of the value of about 400,000*l.* annually.

NORTHERN COAL COMPANY.—Yesterday, Master Tinney entered upon the hearing of claims of third parties creditors against the company. The first was that of a Mr. Davidson, who claimed the sum of 576*l.* as due to his assignees (he having been bankrupt) for commission on sales of coals. After a lengthened investigation, the Master refused to allow the claim, and left the case to the jury.—In the case of Thomas Williams, who had sold 30 shares to a Mr. Wood, but never executed the transfer, the Master gave judgment, refusing to allow costs. The official manager has succeeded in disposing of two of the collieries on terms which have nearly realised the amount expected.

MERIONETSHIRE SLATE AND SLATE SLAB COMPANY.—A meeting of parties interested in the winding up of this undertaking will take place before Master Sir W. Horne, on the 27th inst.

We understand that the shares of the Tremar Company have been nearly all taken up, and the greater portion by highly respectable parties, connected with the first-class mines in the neighbourhood. A good working committee is to be appointed at the first general meeting, which is to take place about the middle, or latter end, of the present month. From the names of the parties communicated to us as forming the leading adventurers, it cannot be doubted that the undertaking will be carried out with spirit and integrity.

Current Prices of Stocks, Shares, & Metals.

MINES.—A considerable business has been done during the week, but in many instances at a reduced figure, and our column of transactions shows, generally, a lower range of prices for dividend mines, whilst for others there has been a good demand, without any particular advance or decline. It is, however, important to note that the *bonâ fide* success of mining adventure has been remarkably exemplified in the sudden, though not unexpected, improvement in several progressive concerns, and which has operated most favourably on the value of the shares. We feel called upon to give especial currency to the fact, that several new companies are projected, with large paid-up capitals, thus compelling the adventurer to the payment of money which may never be wanted, and operating perniciously, as we conceive, on the management, by placing it on a wrong basis at the commencement. To call for funds as they are wanted appears to us the only legitimate mode of conducting British mining operations.

In the Metal Market, Copper is steady, without change.—English Tin continues in good demand: foreign has again advanced, but limited business has been done, in consequence of the small quantity offering.—Lead without change, and firm.

In our list of dividends for January, given last week, that of North Roskear, amounting to 700*l.*, ought to have been included, which sum, added to the total amount, as published, will make the aggregate for the last month 24,974*l.*

The sale of copper ores at Redruth, on Thursday, was 4799 tons, and produced 20,922*l.* 15s. 6d. The next sale (3240 tons) takes place at Redruth.

The sale of black tin from the Great Beam Mine realised from 48*l.* 10s. to 61*l.* per ton, the total amount being 369*l.* 12s. 3d.

Georgia Consols sold two parcels of black tin—one at 54*l.* 10s., the other at 30*l.* per ton.

Bryntail Mine sold 18 tons of lead ore, at 11*l.* 2s. per ton.

The Trelawny Mine sold two parcels of silver-lead ores—100 tons at 21*l.* 11s. 6d., and 70 at 2*l.* 11s. 6d. per ton, realising 2337*l.* 15s.

The Allt-y-Crib Mine sold 30 tons of silver-lead ore, at 12*l.* 1s. per ton.

A sale of silver-lead ores from East Tamar, amounting to 65 tons, realised 14*l.* per ton.

In a large proportion of our mine reports, the agents still complain that their operations have been impeded by the continued and heavy rain by which nearly every locality has been visited. At Trelawny, Wheal Mary Ann, Alfred Consols, and other mines, this obstacle has been especially felt, and an improvement in the weather is generally looked for as a means of giving increased activity to the workings now in progress.

At Devon and Courtenay, the lode in the 40 rise is about 2 feet wide, yielding 1½ tons of copper ore per fm., of excellent quality.

At Wheal Adams, the lode is becoming more productive in the crosscut westerly, with every prospect, according to the report, of a large deposit of ore being speedily reached.

At Holmbush, in extending the 120 fm. level, a branch of the lead lode has been intersected, producing a very fair quantity of lead, and in places rich for silver.

At East Crowndale, the bunch of tin in the bottom of the 40, east of middle shaft, is extending both in length and breadth, and of rich quality.

At Trannack and Bosence, the winze sinking from the 20 to the 30 fm. level is stated to be worth 20*l.* per fm.

A great improvement has taken place at Wheal Crebor, which has caused a considerable demand for the shares at a much advanced price, at which several transactions have been done, but holders are firm.

At Borringdon Park Mine, the lode though only 11 fms. deep, is worth between 30*l.* and 40*l.* per fathom for silver-lead.

At Trelyon Consols, the tin lode still continues good in the 30 fathom level, worth 30*l.* per fm. In Wheal Margery there is a good copper lode in the 60, and a pitch will be set in a few days. The sampling of copper ore is expected to equal the last, and the produce of tin is increasing.

By Alfred Consols report, we perceive that the lode in the 70 fm. level is 9 ft. wide, and worth from 60*l.* to 70*l.* per fm.; and the lode in the rise and stopes over the back of the same level is estimated as high as in the preceeding week—from 120*l.* to 140*l.* per fm.; while the lode in the winze sinking under the 60 fm. level is stated at about 100*l.* per fm.

In the East Crowndale report, it is stated that, during the past month, the prospects of the mine have decidedly improved. In the 40 fm. level a rich bunch of tin has been found, and the value of the lode taken down is estimated at 120*l.* per fm. In other parts of the mine also good results are anticipated.

The reports for East Tamar and South Tamar, on the operations of the past month, are favourable. In the former, progress has been made in driving the different levels; and in the latter mine, a 124 fm. level is about to be driven, which is expected to be productive and profitable, and in the 90 end south the lode has been gradually improving during the whole of the month. A new stamps engine is also being erected.

Since the notices relative to the Cardiganshire mines, inserted in another column, were in type, we have received additional information, of an interesting character, up to the latest moment. From Allt-y-Crib, the first returns made by the present company have been obtained this week, which more than cover the expenses. The first intention was to have forked the water, and get down to the old workings, said to be solid, and of great thickness and extent; but as the works above the adit produce large quantities of ore, it is intended to continue them until a large 50-ft. wheel is completed, when the bottom course of ore will be opened. Cwm Sebon is now giving a profit; the machinery is very extensive, with a 60-ft. water-wheel, the largest working in the county. Some little alterations are making in details, when all is expected to go on smoothly. At Daren, ore sufficient has been raised to pay for the expensive preparatory work, with a balance equal to one-fourth of the cost of a steam-engine, and something left for further development. At Esgair-hir and Esgair-fraith, a course of solid ore is being worked on, where two men will raise 200*l.* worth of ore in about two months. So promising is this property, that it is in contemplation to give it the name suggested by Waller, in 1698, when he made his famous calculation to return 75,000*l.* per annum profit, and give his services for one seventy-fifth of whatever it might be:—viz.: "The Welsh Potosi." The other mines of Cae-gynon, Rhiwleygus, Geller-herein, Court Grange, and Bronfloyd, are progressing as well as could be desired. At Grogwynion, the ground under the great adit has much improved—the ore more massive than in any other mine in the county. Penrhiw is making a small profit, and would do well, if a market could be found for a mineral half iron pyrites and half lead, which might be brought into requisition for manufacturing sulphur, as well as obtaining the lead.

We noticed last week that the late workings of the Great United Mines had not paid cost: at the meeting, held last Friday, the accounts showed a loss on the two months' working of 1300*l.*, and the agents reported that, unless discoveries were made, the mine could not be carried on. It was resolved to give another two months' trial, and unless great improvement takes place, the works must stop, and with them, most probably, the Great Consols, to the distress of the population of Gwennap.

At the North Basset meeting, on Wednesday, a dividend of 1500*l.* was declared, being the third dividend paid since the 1st June last. The accounts for the past year were reviewed, showing—By amount of 3102 tons 8 cwts. of copper ores sold during the year, 18,528*l.* 8s. 2d.—Total costs for working the mine during that period, including royalty, 12,367*l.* 11s.: profit, 6160*l.* 17s. 2d.—To dividends, &c., paid from the 1st of June to, and including, this day, 6070*l.* 0s. 5d.; balance carried to next account, 90*l.* 16s. 9d.—The reports from the mine are most flattering, and shall appear in our next.

At the Wheal Basset two-monthly meeting, on Tuesday, the accounts showed—Labour cost for Nov. and Dec., 2202*l.* 8s. 11d.; merchants' bills, 796*l.* 9s. 9d.=2998*l.* 18s. 8d.—By copper and tin ores sold, Nov. and Dec. (less 1-15th for lord's dues, 403*l.* 16s. 1d.), 5653*l.* 5s. 4d.: leaving profit, 2654*l.* 6s. 8d.; add balance in favour from last account, 490*l.* 9s. 10d.= 3144*l.* 16s. 6d.—By dividend of 10*l.* per share, 2560*l.*: leaving balance to next account, 584*l.* 16s. 6d. It was resolved that more vigorous operations be commenced in the south part of the mine, as soon as convenient.

At the East Basset meeting, representing 236 out of 256 shares, a call of 5*l.* per share was made.

At the South Tolgus meeting, the accounts showed—Ores sold (less dues), 2064*l.* 15s. 1d.—By mine cost and merchants' bills, November and December, 1248*l.* 0s. 7d.: leaving a profit, 816*l.* 14s. 6d.; to which add, balance last account, 87*l.* 6s. 8d., and deduct dividend, 2*l.* 10s. per share, 640*l.*, and paid on account of new engine 150*l.*—leaves balance to next account, 114*l.* 1s. 2d. The report states that the whole of the prospects appear very satisfactory, as the improvement in the eastern levels, on south lode, more than made up for the poverty of the 42 west, on the north lode while in all other parts of the mine the rate of discoveries of ore is fully maintained.

At the Wheal Langford and Wheal Baring United meeting, the mine accounts up to the end of December showed a balance in favour of adventurers, of 744*l.* 4s. 9d. A report on the mine, from Mr. Arthur Dean, was read to the meeting, together with the agent's reports, for which we shall be able to find space next week.

The statement of accounts submitted at the Gustavus meeting showed—To balance in Sept. account, 1272*l.* 15s. 8d.; mine cost for the three months ending in Dec., 357*l.* 1s. 6d.; merchants' bills, 264*l.* 11s. 5d.= 1894*l.* 8s. 7d.—By call of 1*l.* 4s. 9d. per 1026th, 1269*l.* 13s. 6d.: leaving balance against the mine, 624*l.* 15s. 1d. To cover the loss, and for the further prosecution of the mine, it was resolved that a call of 20s. per share be made.

At the Tavy Consols bi-monthly meeting, on Tuesday, the accounts showed—Balance from Dec., 23*l.* 11s.; Nov. cost, 188*l.* 7s. 8d.; Dec., 136*l.* 17s. 8d.; merchants' bills, 122*l.* 6s. 4d.; petty cash, 12*l.* 3s. 9d.= 483*l.* 6s. 5d.—Oct. ores sold, 147*l.* 19s. 7d.; Nov. ditto, 210*l.* 2s. 1d.—balance down, 125*l.* 4s. 9d.; liabilities, 375*l.*; estimated assets in ore, 279*l.*

At the Pendarves Consols meeting, the accounts showed—Balance of last account, 812*l.* 3s. 7d.; mine cost for Oct., Nov., and Dec., 542*l.* 13s.; merchants' bills, 204*l.* 12s. 7d.=1050*l.* 9s. 2d.—By copper ores sold, 27*l.* 18s. 1d.; cash received on call, 513*l.*=787*l.* 18s. 11d.: leaving balance against adventurers, 271*l.* 10s. 3d. A call of 10s. per share was made, to meet the balance and carry on the future operations of the mine.

At the East Sharp Tor meeting, on the 16th Jan., at which Ald. Copeland presided, the accounts were submitted and passed, and the report of the agents received. The accounts showed—Labour cost for Sept., Oct., and Nov., 205*l.* 19s. 7d.; merchants' bills, 97*l.* 7s. 2d.; other disbursements, 115*l.* 7s. 9d. =414*l.* 14s. 6d.—Balance on last account, 137*l.* 12s. 4d.; cash received on call, 510*l.* 10s. = 648*l.* 2s. 4d.: leaving balance in favour of adventurers, 233*l.* 7s. 10d. The liabilities, including the cost for Dec. and outstanding merchants' bills, amount to 294*l.* 18s. 1d.; and the assets, adding one call now due, 234*l.* 17s. 10d. [The report will be found among our Mining Correspondence].

At a general meeting of adventurers in the Black Craig and Craigton Mines, on Monday, Charles Gilpin, Esq., in the chair, the balance-sheet, showing balance in hand, 50*l.* 11s. 11d., and balance of liabilities over assets, 746*l.* 16s., was submitted and passed. Some delay having unavoidably occurred in getting the ore to market, owing to an accident in the adit level, and the sinking of the vessel bearing one cargo to Holywell (which, however, was insured by the committee of management), it was found necessary to make a call of 2s. 6d. per share. There are 63 tons of ore upon the mine, a cargo of which will be sent off for sale as soon as a vessel can be procured. [The captain's report will be found among our Mining Correspondence.]

At the United Mines meeting, held at Tavistock, a committee was appointed to consider the rules and determine on the future operations respecting the mine, and arrangements to be made with the lords of the soil.

At the West Trethellan meeting, the accounts for four months, ending Dec., showed—Balance from last account, 210*l.* 19s. 10d.; ores sold (less dues), 118*l.* 15*l.* 10d.=329*l.* 15s. 8d.—To costs and merchants' bills, 146*l.* 3s. 2d.: leaving balance in favour of adventurers, 183*l.* 12s. 6d.

At a general meeting of Praed Consols, on Tuesday, a small call was made to meet the expenses of opening and clearing the shafts and levels, preparatory to the erection of a steam-engine, which will be down early in the spring.

At the Hennock meeting, it will be seen that there was a balance in favour of adventurers of 173*l.* 18s. 10d.; the total receipts are 1708*l.* 17s.; arrears received, 292*l.* 13s.; cash on call, 375*l.*=2376*l.* 10s.—Mine cost, as stated in former account, 1652*l.* 1s. 5d.; labour for four months ending December, 262*l.* 16s. 2d.; merchants' bills, 257*l.* 18s. 10d.; other charges, 26*l.* 14s. 9d.: leaving balance as stated. The account of liabilities and assets showed a balance of assets of 132*l.* 3s. 7d. The agent's report is satisfactory, and the appointment of Mr. A. Murray, jun., as inspector of the mine, was confirmed, the general feeling of the meeting being that of confidence in the speedy success of the speculation. Some splendid specimens of ore were shown at the meeting, and valuable discoveries, it was stated, were continually being made in the progress of the workings.

In Foreign Mining shares business has been done in Australian at an advance of 10s. on previous prices; also in Cobre, St John del Rey, Worthing, and in United Mexican, the latest quotations of the latter showing an advance of about ¾ on last week's transactions.

At the Australian Mining Company's meeting, on Monday, after considerable discussion, a committee of five shareholders was appointed to investigate all matters connected with the company. The appointment of this committee was made with the full concurrence of the directors, who expressed their willingness to afford every information that may conduce to the object of the inquiry. As yet, no decisive results have attended the five years' operations of the company, although nearly 100,000*l.* capital has been expended on a property, the value of which is now estimated at about 45,000*l.* The directors, nevertheless, still express a confident hope that the value of the property will increase with the prosperity of the colony, and that the undertaking will ultimately meet with success.

The Imperial Brazilian despatches include letters from the superintendent, and reports on the mines, from which it appears that little progress has been made since the last accounts, owing chiefly to a fresh breaking of the milliar, and the water being in the mine. A new milliar and crank have been substituted, and the machine was expected to be again at work. It was intended, as soon as Gibson's machinery was complete, to sink for another level. The produce was limited, a small quantity only for the washing-house having been obtained from Thomas's vein. The appearance of the ground to the north of Wray's shaft is deemed encouraging, and the works continue to go on with great regularity. At Gongo, the progress made in the different works is satisfactory, and portions of the old mine are constantly discovered, and the operations being in what was the richest part of the mine, an increase in the produce is confidently looked for. Joinville's stamps are in course of erection, and, when finished, will be supplied with full work, so that, from the economy used, a small produce will suffice to pay the expenses. The mine reports, which are to Dec. 3, are given at length elsewhere; they refer chiefly to the points above noticed. Very little change has taken place in the workings, which are at present mainly preparatory to future operations. The gold report states the produce from Gongo, from Nov. 13 to Dec. 2, at 6 lbs. 6 ozs. 13 dwts.: and from Bananal, at 3 lbs. 6 ozs. 3 dwts.=10 lbs. 0 oz. 16 dwts.

Despatches have been received by the United Mexican Association, dated Nov. 29th and Dec. 30th, containing accounts of the operations up to that period. From the Rayas Mine, it appears the returns were for—Oct., $9200; for Nov., $43,716; and for Dec., $33,126. In Promontorio the operations had been suspended for a month, awaiting the settlement of a contract to deliver an adjoining tract of ground. At Aldana Mine, the various explorations were continued; but at present without any encouraging results, leaving it doubtful whether the works will not be for a time suspended. In the Jesus Maria and Trinidad Mines, the operations show nothing as yet decisive; but the superintendent will shortly be in a position to form a judgment as to their probable results. A more satisfactory account is given of the workings in Mina Grande, where a body of the vein, 3½ varas in width, has been cut, and 229 cargas of ore extracted, valued at $5000; and it is fully anticipated that in three months this mine will be worked at a profit. The available assets of the associations are now stated to be $77,000.

In the Linares report, a brief summary of the operations for January is presented. The engine-shaft has been sunk 11 ft. since Jan. 10, and good progress is being made. The cross-cut driving from the 45 has been driven 2 fms. 5 ft., and is reset at 6*l.* per fm., leaving 6 ft. to get under the centre of the shaft. Wilson's shaft has been sunk 2 fms. 3 ft. during the past month, in a good lode, yielding full 5 tons per fm. The 55 fm. level, driving west of San Anton winze, has advanced 3 fms. 3 ft., with 12½ fms. to drive to get under Wilson's shaft; the lode through which this level has been driven is worth 4 tons per fm. Progress at a nearly similar rate has been made in Shaw's shaft, and other parts, and the tribute pitches have turned out well. A good deal of valuable ground has been opened, and the mine is reported by the agent as improving. The ore in stock at Linares, is 279 tons; at Seville, 128 tons 13 cwts.; Malaga, 59 tons; on board slip, 43 tons 8 cwts.: total, 510 tons 1 cwt.

Letters have been received by the National Brazilian Company, from Cuiaba and Cocaes, to Dec. 2. At the former mine, the Serrotte lode, now being worked upon, is reported as sure and productive throughout At Cocaes Mine, some operations are in progress at the backs above the inclined plane, but no improvement is observable at the stamps. The produce of the two mines, from November 7 to December 2, is stated at 10 mks. 6 ozs. 1 oit. 6 grs.

The letters of the St. John del Rey Company are to Nov. 28. The result of the preceeding 20 days' stamping was 14,700 oits. from 783 cubic feet of sand, yielding 18·77 oits. per cubic foot. The supply of stone was abundant, but, from the Bahu Mine, of inferior quality, owing to the turning off of the lode, which compelled the taking down of inferior stone. A superior lode is now being laid open, and a decided improvement in the produce is anticipated. Works are also in progress for the construction of arrastres, and, from the experiments already made, they are likely to answer extremely well. As far as the trials have gone, the results are that, from one arrastre, 4, 5, and sometimes 8 oits. of gold are obtained in 24 hours. Every effort is making to hasten the working of the new stamps, and the masonry works, and various other operations, are progressing rapidly to completion, and would be finished, it was anticipated, early in January. A remittance of gold, 381 lbs. troy, valued at 15,240*l.*, has been received.

A call of 1*l.* per share has been made by the Worthing Company: a considerable amount of business has been transacted in the shares.

Quicksilver to the value of 6500*l.*, intended for the prosecution of mining operations in Mexico, was sent out by the *Clyde*, mail steamer, from Southampton, on the 2d inst.

Messrs. Bath, of Swansea, have received 403 tons of copper ore from Coquimbo.

SILVER-LEAD ORE.

Sold at the Mine, on the 31st January.

Mines.	*Tons.*	*Price per Ton.*	*Purchasers.*
Trelawny	100	£21 11 6	T. Somers.
ditto	70	2 11 6	ditto

Sold at Aberystwith on the 1st February.

Bwlch Consols	30	£14 14 0	Walker, Parker, & Co.
Court Grange	24	17 5 6	Newton, Keates, & Co.
Allt-y-Crib	30	12 1 0	ditto

LEAD ORES

Sold at the Mine, on the 31st January.

Mines.	*Tons.*	*Price per Ton.*	*Purchasers.*
Driggith	10	£12 10 0	Locke, Blacket, & Co.
ditto	6	9 10 0	ditto

Sold at Aberystwith, on the 3d February.

East Logylas	50	£11 16 0	Newton, Keates, & Co.
ditto	80	11 13 0	Walker, Parker, & Co.
Frongoch	80	11 13 0	ditto
	Total tons	180 (21 cwts.)	

Sold at Chester, on the 6th February.

Bryntail	18	£11 2 0	Walker, Parker, & Co.

BLACK TIN

Sold at the Mine, on the 31st of January.

Mine.	*Cwts. qr. lbs.*	*Price per Ton.*	*Amount.*
Great Beam	23 0 22	£61 0 0	£ 70 15 0
ditto	41 1 16	60 0 0	124 3 7
ditto	37 1 26	53 10 0	100 5 3
ditto	4 1 23	54 0 0	12 0 7
ditto	4 0 27	49 0 0	10 7 10
ditto	4 0 25	48 10 0	10 4 9
ditto	17 0 25	48 10 0	41 15 3

Total—132 cwts. 0 qr. 24 lbs.—Amount of money, £369 12s. 3d.

Sold on the 6th February.

Mineral Court	81 2 16	58 0 0	Carvedras Smelting Co
ditto	7 3 10	37 0 0	ditto
ditto	6 1 3	57 0 0	ditto
ditto	4 2 10	16 0 0	ditto

Sold at the Mine.

Mines.	*Cwts. qr. lbs.*	*Price per Ton.*	*Purchasers.*
Georgia Consols	50 3 17	£54 10 0	Bolitho & Sons.
ditto	4 1 12	30 0 0	ditto

Mine.	*Tons.*	*Price.*	*Purchasers.*
Drake Walls	5¼	£48 7 6	Daubuz; Calenick Co.; Williams.
ditto	3	42 15 0	ditto, ditto, and ditto
ditto	5¼	48 7 6	Union Smelting Co.
ditto	3	42 15 0	ditto

COPPER ORES.

Sampled Jan. 22, and Sold at Andrew's Hotel, Redruth, Feb. 6.

Mines.	*Tons.*	*Price.*
Tincroft	87	£4 12 6
ditto	82	2 6 6
ditto	71	3 18 6
ditto	62	2 4 6
ditto	57	2 10 6
ditto	56	1 16 6
ditto	55	1 12 0
ditto	54	4 15 6
ditto	51	3 12 0
ditto	50	2 12 6
ditto	45	4 0 0
ditto	44	2 2 0
ditto	1	31 0 0
Wheal Seton	84	3 10 6
ditto	80	4 16 6
ditto	72	1 15 6
ditto	69	4 18 0
ditto	64	5 8 6
ditto	56	5 12 6
ditto	53	5 14 6
ditto	51	5 10 6
ditto	48	2 4 0
ditto	43	4 8 0
Pendarves	30	3 16 0
Wheal Basset	90	2 14 0
ditto	80	2 16 0
ditto	79	6 16 0
ditto	75	2 12 0
ditto	72	3 9 6
ditto	65	6 18 0
ditto	60	19 3 0
ditto	35	5 3 0
North Pool	120	6 4 0
ditto	101	3 4 0
ditto	97	2 8 0
ditto	80	3 14 0
ditto	57	1 12 0
ditto	51	2 8 0
ditto	20	1 3 0
East Wh. Crofty	70	5 6 6
ditto	69	5 8 6
East Wh. Crofty	66	£5 18 0
ditto	64	4 8 0
ditto	61	3 0 0
ditto	39	2 2 0
Dudnance	32	7 10 0
Longelose	21	4 4 0
Camborne Vean	72	3 14 0
ditto	65	3 12 0
ditto	50	3 16 0
ditto	30	1 16 0
Wheal Francis	64	4 8 0
ditto	55	2 10 0
East Pool	88	3 6 0
ditto	77	3 8 0
ditto	63	3 0 0
ditto	55	4 6 0
ditto	51	4 6 0
Condurrow	70	4 17 0
ditto	62	3 14 0
ditto	40	6 12 0
ditto	39	5 14 6
ditto	35	2 0 0
ditto	26	1 12 0
Fowey Consols	124	5 14 6
ditto	86	5 12 6
ditto	60	2 7 0
Dolcoath	72	2 15 0
ditto	58	1 13 6
ditto	45	6 0 0
ditto	34	10 17 0
South Wh. Frances	84	6 6 6
ditto	82	6 12 0
ditto	42	5 15 6
North Roskear	78	6 14 0
ditto	73	5 18 0
West FoweyConsols	68	6 8 0
Pendarves Consols	32	3 16 0
ditto	30	3 19 0
Wheal Harriet	12	3 18 0
Wheal Banns	12	3 4 6

TOTAL PRODUCE.

Tincroft	715	£2263	17	6	Condurrow	272	£1167 16 6
Wheal Seton	646	2760	12	0	Fowey Consols	270	1334 13 0
Wheal Basset	556	3227	3	0	Dolcoath	209	934 1 0
North Pool	526	1832	12	0	South Wh. Frances	208	1315 1 0
East Wh. Crofty, Dudnance, Longelose	442	2011	3	6	North Roskear, West Fowey Cons., Pendarves Consols	151	953 6 0
						68	435 4 0
						62	240 2 0
Camborne Vean, Wheal Francis	336	1164	15	0	Wheal Harriet	12	46 16 0
					Wheal Banns	12	38 14 0
East Pool	334	1197	0	0			

Average Standard ..... £104 15 0 | Average Produce 6¾
Average Price per ton £4 7 0
Quantity of Ore ..... 4799 tons | Quantity of Fine Copper, 325 tons 13 cwts.
Amount of Money £20,922 15 6

LAST SALE.—Average Standard ..... £102 13 0.—Average Produce 7¼
Standard of corresponding sale last month, 110*l.* 10s.—Produce, 6¾.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	223	£1962 13 6
Vivian and Sons	926	4245 9 6
Freeman and Co.	677	2900 8 0
Greenfell and Sons	779	2855 2 2
Crown Company	154	712 8 9
Sims, Willyams, and Co.	585	3078 2 6
Williams, Foster, and Co.	925	4261 8 1
Schneider and Co.	324	1527 7 0
Mason and Elkington	206	979 16 0
Total tons	4799	£20,922 15 6

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea 728—Tywarnhayle 578—Wheal Buller 337—Par Consols 276—Alfred Consols 235—Levant 171—Wellington Mines 165—Polberro Mine 144—West Wheal Treasury 141—Wheal Tremayne 117—West Wheal Seton 115—Wheal Agar 55—East Godolphin 52—St. Aubyn and Grylls 33—West Wheal Providence 28—Wheal Vyvyan 29—East Wheal Tressury 14—Copper House slag 13—Wheal Friendship 11—Wheal Susan 7.—Total quantity of ore to be sold, 3240 tons,

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Josiah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria, 1519—West Caradon 309—Marke Valley 260—Fowey Consols 220—Wheal Friendship 193—Holmbush 193—Phœnix Mines 143—Bedford United Mines 140—West Wheal Jewel 42—Tamar Company's regulus 20—Wheal Gorland 18.—Total, 3057 tons.

NOTICES TO CORRESPONDENTS.

In a few weeks we shall publish the commencement of a SERIES OF PAPERS, to be continued weekly, detailing

The History of Mining,

ITS RISE AND PROGRESS:

together with NOTICES of the EARLY METHODS OF WORKING; ANCIENT and MODERN INVENTIONS, with their subsequent IMPROVEMENTS; comprising also

A SKETCH OF METALLURGICAL OPERATIONS,

from the EARLIEST PERIOD to the PRESENT TIME.

The Great Exhibition.

In the "MINING JOURNAL" will also be given a detailed description, with all necessary illustrations, of every object connected with MINING and ENGINEERING, which may be produced at the forthcoming Great Exhibition.

The Compendium of British Mining,

BY J. Y. WATSON, ESQ., F.G.S.

We have the pleasure to announce, that Mr. WATSON has consented to revise and correct, to the present time, his interesting EPITOME OF BRITISH MINES, for re-publication in our columns—the sixth portion of which appears in this day's Journal. In the "Compendium of British Mining," it will be remembered, the actual position of the different mines is accurately described, both as to capital and working.

At the end of each year, a copious Index is published, which renders the volume an interesting and valuable record.

NORTH WHEAL VOR.—"One of the Slandered" (Camborne), in noticing the letter in last week's Journal, says the locality of the ground is undeniably good, being in the immediate vicinity of the celebrated Wheal Vor Tin Mine; but he is not aware of any promising or kindly lodes having been discovered. The writer denies some of the statements of "Fair Play." It is true that a license was obtained by Mr. G. J. Phillipps about 10 months back for working the ground, and some progress made towards the formation of a company; but at a stormy meeting, held in Camborne, a great difference of opinion was displayed, and much obloquy attached to Mr. Phillipps by persons who complained of their names having been used without their consent: the clergyman of the parish and others becoming dissatisfied, the company was dissolved, and the projector forbid Scorrier House. The writer further adds his belief, that the property has been transferred to Mr. J. N. R. Millett, of Penzance, and that it is the intention of the lords, or their agents, to deprive Capt. Blewitt and his co-adventurers of the benefit of the license recently granted to the former.

"An Adventurer" had better obtain our "Glossary of Mining Terms;" it can be procured of any bookseller, price 2s.

"R. A." (City).—The column of "Transactions" in our Share List undoubtedly includes business done in other mining markets besides the London. Our object being to present as complete a record of business done during the week as we can obtain: the list would be obviously imperfect if confined simply to the sales effected in the metropolis; and with this view we avail ourselves of every trustworthy source of information at our command. Occasional variations in prices may be explained by this fact, since the money value of shares sold in different markets, from local and other circumstances, will inevitably present discrepancies, beyond the power of any individual broker or agent to reconcile.

"A Speculator" (Tavistock).—We have no further knowledge of the company in question than what appears in our columns. It is but natural to be suspicious, when extraordinary results are promised without further risk to the shareholder besides his first deposit; and we can only say to our correspondent, as a word of advice often reiterated in our columns relative to companies of this description—"look before you leap." Prospectuses and information can be obtained at the office, and the most rigid inquiries are necessary.

"J. R" (Regent's-park).—The power arising from capillary attraction is very great. I a dry plug of wood be tightly fitted into a stout tube of glass or porcelain, and the projecting portion be allowed just to dip into water, the wood will swell by the intrusion of the liquid into its pores, and with so great a force as to burst the tube, even though it be capable of resisting a pressure of more than 700 lbs. on the square inch. This power is turned to account in parts of Germany and France, for separating blocks from the solid rock for mill-stones. Holes are bored in its substance, into which wedges of dry wood are tightly driven, and when these are exposed to moisture they swell from the capillary action, and effectually split it in the direction in which they are placed.

THE COPPER TRADE.—We have received a long rejoinder from Mr. G. R. Williams, of Redruth, to Mr. Birkmyre's reply, in last week's *Mining Journal*, but as it is too long for our space, we can merely insert its spirit. It generally happens, unfortunately, that these discussions lead to interminable correspondence, of no avail to general readers. The returns are public documents—represent facts, and require little or no argument to explain them: we must, therefore, at present decline any further communications on this subject. Mr. Williams states that Mr. Birkmyre's reply generally only proves him an alarmist, without any grounds for the extreme views he takes of the subject. That the sentence—"the English copper trade is reduced to very little importance," is much the same as Mr. Williams's quotation—"the copper trade of England is becoming of very little importance"—the context being applicable to each; that all his arithmetical proofs do not in the slightest degree bear out his first premises; and that although his fears make him see "looming in the horizon a far more formidable cloud," he will find, on a proper view of the question, that although copper has been higher in price, the mining interest and the trade were never in a more sound and flourishing state; and that he will find this opinion to prevail among those most competent to judge, as also that the prospects for the future are equally encouraging. We shall shortly, on making up the imports and exports for 1850, enter into an analysis of the matter.

"R. E." (Islington).—Address a letter to the directors, who, we have no doubt, will give such instructions as to remove the cause of complaint in future: the annoyance is scarcely of sufficient importance for public allusion.

"Enquirer" (Leeds).—The smoke-consuming apparatus recently tried in the *Ariel* steamer has, we believe, proved a failure. All the experiments have been at the cost of the patentees—Messrs. Humphrys and Trickett declining to recommend Government to go to any expense in the matter, until some improvements are effected in preventing the escape of smoke while feeding the fires.

We do not know the London office of the Penvivian Mining Company; the Cornish agent is Mr. Crabb, of Bodmin.

"W. M." (Bolton).—Daniell's pyrometer is the most effectual instrument for the measurement of high temperatures. By its aid, it has been ascertained that the fusing point of cast-iron is equal to 2786° Fah., and the highest temperature of a good wind furnace about 3300° Fah.—points which had previously been estimated by Mr. Wedgwood, through the medium of his ingenious but inaccurate instrument, at 20,577° and 32,277° respectively. By Daniell's measurement, the melting point of tin is 420°; the boiling point of mercury, 600°; a red heat, 900°; and the melting point of silver, 1850°.

The communication of "One Interested" (Redruth) can only appear as an advertisement.

"A Constant Subscriber" (Darlaston).—Numerous plans have been suggested and patented for preventing calcareous and other deposits in boilers. For carbonate of lime, which is generally the prevailing deposit, Dr. Ritterbandt's patent process is a thoroughly effective one. By placing a certain proportion of muriate of ammonia in the water, a double decomposition takes place, converting the carbonate of lime into carbonate of ammonia, and muriate of lime, both of which being soluble salts, the former a volatile one, have no effect on the boiler. The gold Isis medal, of the Society of Arts, and the Telford medal, of the Institution of Civil Engineers, were awarded him for the discovery. Delfosse, of Regent-street, patented a compound for the same purpose, consisting of gallic extract, muriate and hydrate of soda, and sub-carbonate of potass, in various proportions, according to the chemical character of the water. Alum is a certain preventive where gypsum or the sulphate of lime is held in solution; a portion of potatoes is kept constantly in the water by some, and is said to be a remedy: and there have been many other substances used, more or less effectual.

NORTH WHEAL VOR.—A communication on the squabbles now taking place between th adventurers in, and claimants to, this sett appeared in last week's *Mining Journal*; and we now inform "Fair Play" we cannot insert any more of these unwise and irritating *ex parte* statements: his present communication is, to say the least of it, personal, if not coarse. It appears a meeting of the adventurers has been held, to consider their position, decide on the course to be pursued; and not yet being quite in despair, they determined to make another effort to obtain the grant, all which they had a perfect right to do. We are not in a position to know whether Messrs. Phillipps and Millett on one side, or the adventurers, whom they oppose, on the other, are in the right or wrong. There is plenty of law in this country to be had for money, which will, no doubt, equitably decide the matter; but while we regret to see these quarrels and broils, so detrimental to legitimate mining, we cannot make the *Mining Journal* a channel for personal slander, and vituperative abuse.

CAMBORNE CONSOLS.—We are not aware whether any sale of ore has, or has not, taken place from this mine, according to the advertisement alluded to. There have been numerous attempts to get the shareholders together at a general meeting, without success: at the last meeting the accounts (which, we were informed, will be published as soon as they have been passed at a general one) were laid before the few who attended, and showed that, up to October last, the outlay had been 2872*l.* 5s., and that, calculating the value of the setts, buildings, and materials at cost price, the balance of assets over liabilities was 3514*l.*

"G. T." (Pimlico).—The view generally taken of Mr. Paxton's proposition for a public free admission to the Great Exhibition is much as we anticipated. It is deemed impracticable, and, if carried into effect, would jeopardise the great purpose of the Exhibition, by introducing a repelling element of discomfort and vulgarity in the most disagreeable sense of the term. Doubtless, Mr. Paxton imagines that regulations might be made, obviating the disadvantages attending a non-paying multitude; but we look for a different decision from the commissioners. We do not, however, think the proposal of a correspondent of the *Times* much of an amendment—viz., that the rates of admission should be very high at first—in order that the aristocratic classes might view the Exhibition quietly and at their ease, and then gradually taper down to the middle classes and ordinary public. We apprehend, that as soon as the curiosity of the "nobility and gentry" were satisfied, the Exhibition would be voted vulgar, to say nothing of the offensive arrogance involved in such an arrangement.

AMENDMENT OF THE LAW OF PATENTS.—A pamphlet has just issued from the press, from the pen of Thomas Turner, Esq., Barrister-at-law of the Middle Temple, under the title of "Remarks on the Amendment of the Law of Patents for Inventions," which at the present eventful period, when so many opinions are broached, and so many plans proposed for a just and equitable modification of the patent laws, will be read with interest, as coming from one who has paid much attention to and previously written on the subject. The author commences by showing that those most affected by a law are not exactly the persons to be implicitly trusted to amend it, and enters into a review of the numerous suggestions and proposals for amendment which have been entered into, and concludes by an exposition of what the main features of a patent law should consist under all its phases, so as to secure certain justice to inventors and the public, without subjecting the former to expenses absolutely ruinous to any but the wealthy capitalist.

"VATES' RAILWAY PROSPECTS FOR 1851 INVESTIGATED."—We have received a pamphlet under the above title, published by Effingham Wilson, Royal Exchange, for the purpose of exposing the fallacies contained in a statement published by a person calling himself "Vates," in Manchester, in September last, prophesying a rise in many railway shares, previously very low, and of which a second edition has just appeared. He then clearly shows the one-sided views of "Vates" on all the principal lines, by taking for his guide increased traffic, without considering increased mileage and expense by which it has been obtained; and that, although the writer states he has calculated the returns at 5 per cent. in his tables, there is not throughout the pages a single calculation at all, nor any appearance of tabular matter; and that every single statement he makes, instead of guiding to prudent investment, can only lead to ruin. Such one-sided, and consequently false, statements, do immense injury to any interest, and are sure to meet exposure, and these few pages, showing up the real facts, are well worthy of perusal.

SODA BY A NEW PROCESS—A WARNING.—We have received a communication from "An Intended Victim" (Northwich, in Cheshire), who is connected with the salt trade, in which he states that "Plain Dealer," in reference to the soda manufacture scheme, in last week's *Mining Journal*, has done a public service in exposing such attempts to take in the unwary; and he mentions that, about three years since, an elderly man, calling himself Dr., whom he believes is the same party alluded to by "Plain Dealer," was introduced by a Liverpool friend, whose acquaintance he by some means had made, and recommended to consider a proposal by the foreign Dr. for a grand and profitable process for the manufacture of soda direct from the brine. His terms were 500*l.*, cash down, which he wanted for present use (and which requirement his appearance did not deny), and a further sum of 2000*l.* to be secured to him, with a share of the profits, while the invention was not to be secured to the purchaser; but the Dr. was to be at liberty to treat with others, if he could find purchasers. Our correspondent being chemist enough to know the pretended process was all humbug, and an attempt at a regular *do* out of 500*l.*, buttoned up his pockets, and wished the adventurous Dr. good morning; and he cautions all speculators to beware of many similar attempts, which will be made in the present year by adventurers from all parts of the world. The Dr., finding no soda-making gulls in Liverpool, "bolted," and has not since been seen in the neighbourhood.

"W." (Kennington).—The office of the Gaspé Fishery and Coal Mining Company is at 34, Dowgate-hill, where application should be made for the information. The next meeting is fixed for the 14th March.

GWINEAR CONSOLS.—"A Subscriber" inquires what has been done with this mine and the company? He says it is reported that some party in London purchased up a large portion of the shares at a very low price, and have recommenced working it under a new name, and that the shares are now at a premium. If our correspondent is a shareholder, and no notice in the usual manner was served him to attend a meeting for winding-up the affairs of the previous company, he undoubtedly is still a legal holder, and has his remedy. We should expect that, on preferring his claim, no objection could possibly be made to it.

THE COMPENDIUM OF BRITISH MINING.—SIR: In your "Notices to Correspondents" of last week, I observe that "A Mine Agent," of Redruth, has commented upon the similarity of some remarks in the "Compendium" to the writings of Mr. Henwood. Will you, therefore, allow me to state that the original "Compendium," as published entire eight years ago, was *professedly a compilation* for the "use of those not conversant with mining," and the greater part (excepting the statistical matter) was culled from the works of De la Beche, Carne, Henwood, &c. I claim no merit for originality in the geological portions of the work; and whilst I am glad to see the discussion, I regret that "Argus," of Truro, did not put forth his strictures when the same were published in the *Mining Journal* edition of the "Compendium" in 1848.—J. Y. WATSON: *St. Michael's-alley, Cornhill, Feb. 7.*

In Mr. Birkmyre's letter, last week, eighth line from bottom, *for* Philadelphia, *read* "Pennsylvania."

We regret that pressure on our space has compelled us again to postpone the Baron Von Rathen's paper on Light and Air for the Miner—it shall certainly appear in our next; when also we shall publish Mr. David Mushet's paper on the Waste Gases from the Blast Furnace; and several others, unavoidably postponed.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

*** It is particularly requested that all communications may be addressed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, FEBRUARY 8, 1851.

THE MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

Her most Gracious MAJESTY has opened the session of 1851, and the representatives of the people have recommenced their arduous labours. It must be in the recollection of our readers, that for a long period our endeavours were devoted to urging on the Legislature the importance of some protection being afforded to the working miner and collier. We are not so vain as to imagine that it was our humble efforts which first directed the attention of the Government to taking some decisive steps to remedy this monstrous ill, but we flatter ourselves that the facts and figures which, from time to time, we collected and carefully recorded, were in some degree instrumental in proving the absolute necessity of some legislative interference. In the session of 1849 a committee was appointed to inquire into the state of the mines and collieries; before that body a host of witnesses were examined, comprising, among the number, Government commissioners, men eminent for their scientific abilities, coalowners, viewers, and operative miners. This mass of evidence, illustrated by diagrams, was published in a ponderous blue book, and ushered forth to the world. From the lateness of the session at which the labours of the committee terminated, it was not expected that any measure could be brought forward that year; but it was confidently anticipated, from the valuable information gathered by them, that sufficient data would be obtained from which a good and efficient enactment, calculated to meet nearly every difficulty, could be framed. The six months' vacation intervened, thereby allowing the authorities a sufficient period to digest and arrange in a practical form the materials which had been obtained at such a cost of labour, time, and expense; and the working men, whose interests were to be guarded by this measure, eagerly looked forward to its appearance early in the session of 1850. From some of those causes which are, unfortunately, of too frequent occurrence in both the Upper and Lower House, it was delayed from time to time, and was not sent down to the Commons from the Lords until the 22d of July. As the session was then rapidly drawing to a close, a great deal of business, as is invariably the case (which had experienced the same fate), had to be transacted; and in common with several other measures, the bill intituled "An Act for Inspection of Coal Mines in Great Britain," was obliged to be hurried through the House without any discussion as to its merits, in order that it might receive the Royal Assent, which was given on the 10th of August last, exactly one day before Parliament was prorogued, This Act, though greatly defective, we received as an instalment, in hopes that when it had been in operation some months, it would be found necessary to further extend the powers given to the inspectors, and amend its defects; a considerable time, however, was allowed to elapse before any active steps were taken, and it was not until the attention of the HOME SECRETARY was aroused by several most appalling accidents, that he thought proper to show that it was his intention to attempt to employ the powers vested in him by the bill; when, *mirabile dictu*, for the whole of this "coal-producing country" he appointed *four* inspectors. We are willing to admit that the right honourable gentleman could not have made a better selection; the scientific acquirements and practical abilities of the parties chosen are so well known that even the most captious individuals cannot carp at their appointment. The Act in its fourth clause says, "that no person who shall act or practice as a land agent, or as a manager, viewer, or agent of, or be otherwise employed in, any coal mine or colliery shall act as inspector under this Act." We would ask, how is it possible that a proper and efficient inspection of the mines and collieries of Great Britain can be effectually performed by four persons, however zealous they may be in the prosecution of their duties, and competent from their acquirements? It cannot be expected that they can know the locality of every colliery in their present enormous districts, without having recourse to the parties interested in the mine, either as owner or viewer, and likely to give their own ideas on subjects so intimately connected with their own interests, thereby constituting them sub-inspectors, and, in a great measure, nullifying this clause of the Act.

Since the passing of the bill, up to the end of the preceding year, no less than 110 met their death by explosion, and 60 by falls of roof; while 145 were injured, 15 of that number being by fall of roof, and the remainder by explosion. In our Journal of the 11th Jan. a detailed account of these accidents will be found. The number has no way diminished, but would seem to be slightly on the increase; in every case after accidents the inspectors have inquired into the cause of the calamity, and reported thereon. Though it may be satisfactory to the relatives and friends of those who have perished, or been severely injured, to know the reasons which have led to the waste of human life, which has deprived them, in many instances, of their sole protectors and means of support, we cannot but express our humble opinion that, had a timely inspection taken place beforehand, much evil would have been prevented, though we are by no means so sanguine as to imagine that all disasters could be effectually remedied. While on this subject, it will be as well to glance at the system of inspection pursued on the other side of the Channel. It will be known that the mineral produce of France, in every department, is much less than that of England for mining purposes. France is divided into eight districts—the north, north-east, east, centre, south-east, south-west, west, and north-west, each of which is under the supervision of an inspector-general. In every *arrondissement* there is a principal inspector, denominated the Ingénieur-en-Chef; these are 17 in number. Under them are the ingénieurs ordinaires, answering to sub-inspectors, who reside in towns, as nearly as possible equi-distant from the mines they have to inspect; their number is 36. They have to report to the Ingénieur-en-Chef, who, in addition to his own duties of making returns to the inspectors-general, has the special superintendence of a *sous-arrondissement*. The lowest class are generally practical men, and styled *gardes-mines*. They generally are stationed near the mines, and are at hand, on all occasions, to assist their principal. They are divided into four classes, and are 58 in number: in fact, the whole body may be entitled a subterranean police, as they have power to see that the shafts are properly timbered and ventilated, and that the workings are so carried on that no danger shall arise to the health or life of the labourers. The whole is under the direction of the Minister of Public Works. So important is this branch of industry considered in France, that there are two bureaus connected with that administration specially devoted to mines, and the sciences allied to it. The first bureau has under its supervision the granting of setts, geological and subterranean topography, inspection of mines, &c., scrip companies (*sociétés anonymes*) and others, and steam-engines. The following subjects are under the control of the second:—Metallurgical furnaces, collection of statistical documents on mines and smelting-works, works relating to mining, chemical laboratories, questions of Customs and Excise, technical questions, &c. We do not mean to advocate that this system, in all its details, should be carried out in England; excessive interference is apt to be vexatious, and repugnant to the English character; but we certainly think that, while much might be avoided which is not needed where private enterprise is so great as here, a great deal that is useful is to be learnt from our continental neighbours. We are aware that by many we shall be told that the new bill has not yet been fairly tried, and that it will be time to make alterations when it has been found to be inefficient. We repeat that no effectual protection can be afforded to the working miner until the number of inspectors is increased, and a competent staff of sub-inspectors organised to assist them, so that danger may be avoided instead of lamented, and inquired into when it has unfortunately occurred. We confidently trust the representatives from the mining districts will inquire of Sir G. GREY why he has so inertly carried the Act into operation; and if a more comprehensive bill cannot be obtained, urge on him the necessity of fairly testing the merits of the present measure. We have thought it our duty to call the attention of Members thus early in the session, as we considered, from the importance of the interests involved, the amount of capital invested, the number of persons employed, and the dangers daily besetting them, that it is a question which should not be lightly dealt with—settled by an evasive answer of the HOME SECRETARY, and then sent to sleep in the "tomb of the Capulets." It may not be inapposite here to allude to the fact, that in a short period numbers of foreigners from the mining districts of Germany, France, Scandinavia, and other countries, will flock to our shores. After visiting London and its wonders, their course will be bent to our mineral counties, where, it is hoped, that the same courtesy which they have extended to all Englishmen visiting the Hartz, Erzegeberge, &c., will be shown to them. There all mines, smelting-works, and chemical laboratories, are thrown open to the stranger, and all information required courteously rendered. We do not allude to the several modes of operation that will strike them as different to their own method of manipulation; but of this we are painfully convinced. While they will award us the palm for practical superiority, they cannot fail to see how deficient some of our best men are in the chemical and theoretical branches of their profession; and they will learn with surprise that the country which has produced a LYELL, MURCHISON, DE LA BECHE, and a host of other talented names, does not possess a school of mines. Grants of money have been made in this country for purposes most trivial, wasteful, and unnecessary; but a small annual grant, assisted as it would be by private individuals, would be sufficient to endow an establishment, where instruction could be afforded in all sciences connected with mining, and the operative could obtain that information which would be of incalculable benefit to him and his employer; and by the knowledge so acquired, and practically carried out, much of the evils that are complained of would be obviated. In certain districts, a few years since, there was a distaste and considerable opposition shown by interested and ignorant individuals to the introduction of such an establishment; the spirit of inquiry has since then been abroad. This feeling is now nearly extinct, and the foundation of a mining school would be hailed with satisfaction by all parties; and the Member who should be instrumental in bringing this question under the notice of the Legislature, at the same time he received the gratitude of all concerned in mining industry and enterprise, would be conferring a boon on the country in general, and by the diffusion of practical knowledge, a blessing on generations yet unborn.

We have lately received numerous communications on the present depressed state of the Scotch pig-iron trade, the causes which have led to such depression, and the best means of counteracting the evil; and it being evident that such depression does exist, we shall now endeavour to lay before our readers some of the causes to which it may be ascribed. It was noticed in the Glasgow article on the iron trade, in the MINING JOURNAL of the 25th January last, that an important meeting of the iron trade had taken place, to consider the best means to be adopted for counteracting the strong *prejudice* existing in England against the use of Scotch iron: this meeting was merely preliminary to a general one, at which a report will be read, and it is further stated that no means will be left untried to demonstrate the injustice of this prepossession for other metal than Scotch. Assuming such prejudice to exist, we may naturally suppose it to be the leading cause of the depressed state of the iron trade; and it would appear this *prejudice* may be ascribed to more than one cause. In the first place, we have before us the annual circulars of eight or ten metal brokers, nearly all of which disagree in some important particulars, especially as to stocks, production of pig-iron, &c. It is most unsatisfactory that there is no correct or authentic information on these points, nor can it be wondered at that a trade should be in a depressed and unsound state, and prices fluctuating and unremunerating, while really necessary and good information is not to be had upon its details The makers would be much advancing their own interests by publishing every particular: hitherto they have thrown every obstacle they could possibly raise in the way, and endeavoured to conceal facts, for the purpose of taking every advantage under the much-to-be-deprecated *scrip* system, and there will be no necessity for concealment on its entire abolition. There can be no doubt that this system has been one of the principal causes of the large extension of the works in Scotland, in some instances doubling the working capital of the makers. If makers require to sell, let them be paid on delivery of the iron. The absurd practice of furnishing them with capital by purchasing their scrip, while they are supplying the real consumers, and also themselves exporting iron to foreign markets at *lower prices* than those at which they supply "scrip," must now shortly (if it has not already) come to an end; and it is only surprising that the public should so long have been deluded by it. Under all these circumstances, the depressed state of prices complained of is not to be wondered at; and it is probable when this pernicious system is wholly extirpated, and a better state of things established, more prosperous times may be anticipated, providing the make is properly regulated, and correct information supplied as to stocks, production, sales, exports, &c.

Another correspondent ascribes the "prejudice," which he assures us is not confined to this country, against Scotch pig-iron to be the general production of hot-blast iron. The competition among the masters as to who shall produce the greatest number of tons of iron from a certain amount of fuel, although the result is an iron of inferior quality, and totally unfit for any works of importance requiring safety and security in resisting impact, or bearing great weights. In a pamphlet, published as long since as 1842, by Mr. HENRY HARTOP, of Barnborough Hall, Rotherham, it is stated that the most unjustifiable means have been adopted to uphold the prices of hot-blast iron—that statements of experiments, made by our

most eminent men, showing it to be superior to cold-blast, had been recklessly put forward, and afterwards contradicted—that it has been proved that within three years after the introduction of hot-blast iron, more accidents had taken place from the breakage of iron-work in mills, and other large machinery, than in 25 years before, in consequence of employing the produce of the hot-blast. These views were confirmed by the arbitration of the ironmasters in the well-known case of the hot-blast proprietors of Penydarran, Aberdare, and Tredegar, in 1844—their final award being that the patentees were entitled to nothing, as there was no advantage gained by the use of heated air, and ordered each party to pay their own expenses. Whether one or all these is the real cause of the present depression of the trade, it is high time the Scotch makers set their house in order, and by conducting the manufacture and sale of iron on sound commercial principles, secure successful results for the future.

Anxious to do justice in all cases where charges are made against any party, we last week published, as far as our space would allow, an epitome of a report by Messrs. Wood, Forster, and Anderson, forwarded us by Mr. Jobling, viewer of the Jarrow Colliery, on which he relied as an explanation and defence against the truly alarming statements and charges contained in a communication, published in the Mining Journal a fortnight since. We have already intimated how much rather we should have seen Mr. Jopling meet the question on its merits, and clearly contradict the charges, than rely for exoneration on the equivocal course he adopted, of merely forwarding a written report by three gentlemen, the contents of which is totally at variance with their own evidence, given, on previous occasions, before the South Shields' Committee, and those of the Houses of Parliament. We have received another communication from our correspondent upon the painful subject, which appears so truthful and undeniable, that it becomes a positive duty we owe the working collier and the public to insert it, and which will accordingly be found in another column. Happy shall we be to insert any reply tending to modify the severity of the case, or qualify opinions which may be formed on its perusal; but of this we feel assured, that from the publicity we have given the subject, whether discussion or not arises upon it, the circumstance will call public attention, as well as that in the proper quarter, not only to Jarrow and other fiery collieries, but to the best means of securing safety and health in all our coal districts.

In our last week's Journal, we adverted to a prospectus which had been issued in a guise that appeared to us calculated to mislead the mining adventurer—meaning thereby the "out" adventurer, and not those who, like ourselves, were possessed of some knowledge of the locality, and of "past" times. We will endeavour to answer, or refute, the charges made against us, and refer to "facts and figures," which appear to be so objectionable to our correspondent, and to substantiate the statement made by us; while we readily afford the opportunity of "A Proprietor" to explain away, if so he can, any remarks which we have made. But to the letter, which we insert in another column; and, in noting it, we will see how far the writer is borne out in the allegations put forward by him. In the first place, we contend that a mine carried on under the Cost-book System cannot issue scrip certificates, so as to "secure shareholders against further liability;" for the Cost-book System does not admit of "scrip," but every adventurer must have his name recorded on the cost-book of the mine; while the issue of scrip certificates, we would contend, places the company under the Joint-Stock Registration Act, and its penalties, which we would recommend the projectors to consult. We are told that the comments made would not have been warranted, had we "acquainted" ourselves "with the facts and merits of the undertaking." Now, it so happens that we know all the "facts." The "merits," perhaps, are better known to the projectors, or "trustees," as they term themselves, and, consequently, acting on behalf of the shareholders in such capacity of *trust* to benefit them, and protect their interests. We would simply ask, is it so?

Space will hardly admit of our doing justice to the letter of our correspondent, who, as he informs us, if we favour him "with a call at the office of the company," will "explain fully" "the mode proposed to be adopted for conducting the affairs of the mine." Now, this is beside the question. As to how it may be worked, we have never given an opinion; but we hesitate not to repeat, that 4000*l.*, as a bonus for two abandoned setts, is an insult to common sense, and we should not be worthy the position we hold, as public journalists, and, as we profess to be, the protectors of the mining interests, had we allowed such a prospectus to pass unnoticed.

Our correspondent says we have "commented upon the statements put forth as if untrue, but do not refute them." On this point we can only refer to the prospectus itself and our remarks, while "facts" will "figure" for themselves. We are told by our correspondent that the "mineral wealth of the district" was known and acknowledged "centuries ago." How is it, then, that the mines should have so long remained unnoticed, and that the riches contemplated at the present time should not, ere this, have been realised? Wheal Brothers was, no doubt, originally in 100 shares—or, the writer may have said, in one or two shares—as they were held by the late Capt. Joseph Malachy and his father, but they were afterwards put into 1000 shares. A scrip company was subsequently formed, and 5000 shares, of a *nominal* amount of 20*l.* each, issued, which, as we stated, were sold at 40*l.* per share. It does so happen that we know the "fact," and, therefore, there can be no "assumption." Should our correspondent wish further detail, "if he will favour us with a call at the office," we think we can undeceive him. As regards the assay made, we do not doubt the "fact" for a moment, but we believe it is also well known that "one swallow does not make a summer." As regards the purchase money, we repeat that 4000*l.* is somewhat rather "too much," while no explanation has been afforded, showing that the projectors (who, as "trustees," must be considered as representing the adventurers) ever paid any such amount; and as to 6000*l.* additional being required on the Scrip System, we only say—"Beware."

Although a very general, indeed almost unanimous, feeling exists that the Patent Laws, as at present constituted, require a thorough revision and sweeping modification, much difference of opinion prevails as to the mode to be adopted in carrying out the necessary reform for the security of inventors generally—the enabling the poor deviser to secure the fruits of his talents and perseverance without a large *immediate* money payment, and, at the same time, that all public rights and advantages remain uninfringed. The plan proposed by the "Association for the Protection and Regulation of Patent Property," which we noticed in the Mining Journal of the 18th Jan. last, although approved of by many to a certain extent, is condemned by others; and, among numerous correspondents on the subject, we have received a communication from Mr. Campin, to whom, we think, the public are much indebted for the exertions he has used in keeping this important subject alive to the public and the Government. Mr. Campin is, however, evidently labouring under a misconception of the details of the plan of the association, if the synopsis given by Mr. Lund, one of the committee, are correct, which he cannot carefully have perused; for if he again refers thereto, he will find that instead of 100*l.* being proposed to be paid, it is only 50*l.*, which shall secure a patent for the United Kingdom for seven years; the payment of a further sum of 30*l.*, at the expiration of this time, a further seven years' security; and a third payment of 20*l.*, at the 15 years' end, secures the patent for another seven years, thus securing 21 years' possession by the payment of 100*l.*, payable by instalments, spread over 14 years—a plan, we think, highly desirable, and the sum quite sufficiently large in amount to prevent any undue multiplication of valueless patents. Mr. Campin also observes on the proposed copies of specification and diagrams, "independent of the 100*l.*, the inventor is put to the expense of printing nearly 500 copies of his specification, and *engraving* his drawings," which would frequently amount to 100*l.* more. It is not so! In their prospectus, they show that this expense would not be equivalent to what is now paid for the specification alone, under the present defective and unsatisfactory system. At all events, the plan was not put forward as perfect, but to be modified, and its details arranged, as hereafter may be decided on. Another prospectus is before us from the "National Patent Law Amendment Association," in which they propose that the *entry* of a patent, with descriptive declaration, shall have immediate and secure protection at the cost of a few shillings, and that the cost of stamp duty, which should be the only subsequent charge, should not exceed 30*l.* This preliminary security for a small fee, leaving the inventor at liberty, whether he follows his patent up or not, is to meet the peculiar circumstances occasioned by the Great Exhibition, to prevent new but unpatented inventions from being unjustly appropriated by any but the discoverers; but as even this would not protect an English inventor here from foreigners taking out patents in another country, we would suggest—for the present year, at least—a sort of international patent law, whereby all the Governments of Europe and the United States should agree that no new invention, or improvement, exhibited to public inspection, should be patented in any country but by the exhibitor himself, or his assignees. By the ambassadors, at the suggestion of our Home Secretary, putting themselves in communication with their several Governments, such an arrangement might be concluded in a very short period, and would, doubtless, impart general confidence and satisfaction. Another suggestion relative to foreign patents has also been made to us, which we think probable would often prove more profitable to the exchequer of a Government than the present system. It is that, supposing an English patentee wishes to secure the sole sale of his invention in France or Belgium, or a French or Belgian patentee the like in England, without taking out a patent for such other country, he may appoint agents for the sale of his property, who shall each pay a certain sum to the Government, either as per centage on the articles sold, or as a periodical tax, as long as sales take place. We think this plan would be exceedingly simple and satisfactory: each Government would reap advantage as long as the article was patronised by the public, and the inventor would not pay his money without gaining an equivalent.

ON THE FUTURE PRODUCTION OF SILVER.

In the *Daily News* of Thursday last, an inquiry is entered into as to the future expected increased production of silver from the newly-discovered sources in California, and the extended workings in South America and other countries. In the production of silver, the raising the crude ore in ever such large quantities is not sufficient; as, from all the present known methods of reduction, it appears a necessary consequence that the yield of silver depends upon the plentiful and regular supply of mercury. The full advantages gained by steam-power applied to machinery, which has kept many deep mines at work that must otherwise have been suspended, cannot be availed of, and has been greatly checked, by an insufficiency, or the high price of quicksilver, supplied through the monopolists of Almaden. The day may, perhaps, come when silver ores, like those of copper, lead, and hæmatitic iron, may be taken to the smelter, who has fuel at command, but the machinery of transport has to be provided in countries new, thinly peopled, and almost deserted.

The new Almaden mines, in California, hold out expectations of a large supply, and great reduction in the price, of quicksilver, which has already, in anticipation, fallen considerably in Pasco and other South American mining districts—a floating policy having been opened in London for shipments on the Pacific for 300,000 lbs. of that metal.

The writer then proceeds to inquire what quantity of quicksilver is required to produce a pound of silver, and what quantity of silver will a given quantity of Californian quicksilver produce. The basis taken for this inquiry is Mexico, as the production of silver there is large, and a good supply of quicksilver is obtained from Europe. The estimate of the coinage of all Mexico for 1849 is $20,000,000, of which $9,000,000 were from Guanaxuato, where the amalgamation process is best conducted.

The cost of raising quicksilver at Almaden is about 18 Spanish dollars per quintal, and is supplied to the Spanish mines at $45. In London, the selling price is now 3s. 9d. per lb.; it has been as high as 4s. 6d., and in 1829 was as low as 2s. 10d. In 1849, the cash price in Guanaxuato was $118, while from California a quotation is given, dated last Aug., at $16 per quintal, a reduction of remarkable importance to the silver mining interest. The writer then supposes that 300,000 lbs., the amount in the floating insurance, should be shipped every two months; this would produce as much silver as Mexico, $18,000,000, or 4,000,000*l.* sterling, a quantity not more than corresponding to the amount of gold now pouring in from California; and he expresses the opinion that, even should a still larger amount be shipped, it would not immediately stimulate silver mining to the extent some persons believe.

The Stannary Laws.—These laws, originally made for the encouragement and support of those engaged in raising, dressing, and selling tin-stuff, and the production of the metal in Cornwall, are still strictly confined to that county, nor has the Warden, Vice-Warden, or any officers of the Court any jurisdiction beyond its boundaries, further than the subpœna on a witness is a good service in any part of the kingdom. The last Acts of Parliament on the subject were 6 and 7 William IV., cap. 106; 2 and 3 Victoria, cap. 58; 7 and 8 Victoria, cap. 105; and 11 and 12 Victoria, cap. 83, which merely made further provisions for improving the practice and proceedings of the Court, without interfering with its ancient jurisdiction as to boundaries. But by 6 and 7 William IV., cap. 106, the court of common law formerly held before the stewards of the four Stannaries, are consolidated into one court, presided over by the Vice-Warden, and held at Truro, its jurisdiction extending from tin mines only, to all others in which any metallic mineral is raised. There is an appeal to the Privy Council, and from thence to the House of Lords. By the charters of John and Edward I. the tinners of Cornwall and *Devon* were elevated into a regularly constituted body; but the latter becoming jealous of the powers exercised in both counties united, divided them into two sections, restricting the jurisdiction of each to its proper district, and apportioning to Cornwall five, and to Devon three, towns for the tin coinage. The laws of the Stannaries of Cornwall remain in full force, having been remodelled by the Acts above-named, while those for Devon appear to have fallen completely into disuetude. Probably it may yet be found desirable, as mining becomes more extended, to bring Devon and even Somersetshire within the jurisdiction of the Stannary Courts.

Patent Fuel.—Mr. William Rees, of Pembrey, has patented an invention for the manufacture of fuel from small coal, which is likely to prove of much importance. By the process employed, all the refuse coal of any description may be solidified, without the admixture of tar, and thus diffuse none of those noxious smells so annoying in the neighbourhood of fuel works. The coal thus compressed is said to be superior to the large of the same vein, and is equally suitable for steam, manufacturing, or domestic purposes.

Hydraulic Mortar.—The following particulars respecting the manufacture of mortar for works exposed to the action of, or under water, and which is now being used for the hydraulic works at the Birkenhead Docks, may be interesting to all, and useful to some of our readers. The best limestone for this purpose is that obtained from the Halkin Mountain, near Holywell, in Flintshire. It is shipped in the Dee, and landed in Liverpool, at 7*s.* 3*d.* per ton. The cost of burning 4½ tons of stone, including the above 7*s.* 3*d.*, is 2*l.* 15*s.* 10½*d.*, producing 3 tons of lime, at 18*s.* 7½*d.* per ton. Mortar from the mill costs from 9*s.* 6*d.* to 10*s.* 6*d.* per cubic yard, and sand from the Mersey is used in proportions varying from 2 to 5 to 1 of lime by measure. The lime kilns are close to the mortar shed, the lime is slaked direct from the kiln's mouth, the mortar is used fresh generally on the day it is made, it sets rapidly, and the work speedily becomes one solid mass. Grouting is made to a great extent from the same mortar.

Iron Ore.—Messrs. Tulk and Ley, of the Lowca Iron-Works, have succeeded, after eight years' exploration, in discovering an extensive vein of iron ore, of the richest and purest quality in the Winder estate—the freehold of which belongs to Mrs. Armitstead, from whom Messrs. Tulk and Ley hold the royalty. The success of these gentlemen, after so much perseverance, cannot but stimulate and encourage Messrs. Robinson, Thorburn, and Barker, who are boring in the same neighbourhood.—*Whitehaven Herald.*

Another Monster Piece of Coal for the Exhibition.—We understand that Messrs. Haines, coalmasters, of Tipton, have been succesful in raising from one of their pits in that parish an enormous piece of coal, to be exhibited at the "World's Fair." It measures 7 feet 7 inches wide, and is 9 feet 6 inches high; the estimated weight is 12 tons. The shaft up which is was sucessfully brought is 180 yards deep.—*Birmingham Journal.*

It is stated that the plans of the proposed submarine telegraph between England and France have been lodged with the French Government, and that the company for carrying out the undertaking is in course of definite formation. It is mentioned also that a telegraphic communication from Calais to Trieste will be completed by the 1st March next, when the whole of the French lines will be open to the public.—*Times.*

Original Correspondence.

THE IMPENDING EXPLOSION—JARROW COLLIERY.

Sir,—Such a report—so erroneous in fact, so false in conclusion, so pregnant with disaster—as that transmitted to you by Mr. Jobling as the report of Messrs. Wood, Forster, and Anderson, on Jarrow Colliery, seldom meets the public eye. Endeavouring to sustain a course of procedure, not only unusual, but unprecedented; not only not indispensable, but unnecessary; removing salutary responsibility; hardening the heart against "the earnest pleadings of the men for their lives," as you have emphatically expressed it; setting at defiance all previous experience and the decisions of the Government inspector, they have attempted to set free from restraint the directors of this fearful mine, and have sanctioned the machinery for rousing into fatal action this dormant volcano. This extraordinary document, from whatever motive it originated, will give deep and lasting regret to all connected with the mines; and, if permitted to be acted on, I hope will not, on some fearful day, involve its authors in responsibilities that a life of remorse will not obliterate. Do these parties conceive that, with the facts before the public, undenied and undeniable, with those I shall now develope, that in case of fatal results "God or their country" will hold them guiltless?

Let us examine this report. It asserts "that the air passing through the mine was ample." Jarrow Colliery has only one pit, which is divided into three parts by wooden brattices; the sectional area of the downcasts is about 77 ft., supplying 41,580 cubic feet per minute in 1845 (Prof. Playfair's *Report*, Sept. 30, 1845), and in 1842 there were, by actual measurement, 42,660 cubic feet per minute (*Shields' Report*, p. 33). By this supply, in the Bensham seam alone, there are upwards of 600 acres, or considerably more than 100 miles of workings to be ventilated, besides the Low Main seam, at present not worked, receiving about 5000 cubic feet, and the High Main from 5000 to 6000 cubic feet per minute; so that in "the most fiery seam in the north," according to Mr. Wood (*Minutes of Evidence*, 1849, 2022); "the most fiery seam in our district," according to Mr. Forster (*Minutes of Evidence*, 1849, 2641). This seam, in which, under Mr. Anderson's management, at the St. Hilda Pit, in 1839, 51 people were killed. *This Bensham seam*, which, in 1830, killed 42 people in Jarrow; in 1835, 105 people in Walls-End; in 1841, 32 people in Wellington. It is enough, say they, in such a seam, to ventilate 600 acres of it, day and night discharging gas, with about 32,000 cubic feet of air per minute. This air, we find, is scarcely to be traced in the boards of the ramifications of the workings not a mile an hour. When Prof. Playfair visited Jarrow, immediately after the explosion of 1845, he found the Bensham seam of 600 acres filled with gas (*Report*, 1845). An accident happened to the brattice of Jarrow Pit, Feb. 2, 1841, and in three days 7,700,000 cubic feet of passages were filled with gas (*Shields' Report*, p. 7), giving nearly 4000 cubic feet of gas per minute. Now, with more extended workings, more gas will be evolved; but take it at the period referred to, and take in addition that 1 of gas in 16 to 18 of air, according to Davy and others, will produce slight explosions, though 1 in 8 are the most destructive; so then, to make a pit safe in all its parts, and to guard against explosion, there should be at least 30 of air to 1 of gas; if so, Jarrow is not properly ventilated under 120,000 cubic feet per minute. It has now in the Bensham seam 32,000 cubic feet. How these parties could make an assertion so extraordinary, "that the air was ample," it is impossible to comprehend. If this air be enough, according to Mr. Wood, in this fiery seam, with upwards of 100 miles of workings, and only a single shaft, how does it happen that in a mine not distinguished for its fiery nature Mr. Wood should himself not be content with less than two downcasts and one upcast, with three furnaces, pouring 168,850 cubic feet per minute through 70 miles of the Hetton Mine?—(*Evidences*, 1849, 1818, 1833, 1846) If so, was that not a waste of capital in unnecessary shafts, and waste of expense in burning nearly 1750 tons of coal a year in useless furnaces? If 32,000 cubic feet be enough for Jarrow, according to Mr. Wood, 168,000 cubic feet is seven times too much for Hetton, according to Mr. Wood. And if 32,000 cubic feet be enough for Jarrow, with 600 acres, according to Mr. Forster, how does it happen that the same Mr. Forster, in Seaton Delaval (a mine that is far from fiery, with only 400 acres of working, and with four downcasts and two upcasts, giving him 53,058 cubic feet per minute), should not have been content till he had applied Gurney's steam-jet, producing 95,984 cubic feet per minute?—(*Evidences*, 2562, 3626.) If 32,000 cubic feet be enough for 600 acres in a fiery seam, 21,000 ought to have been enough, and Mr. Forster content with it, for 400 acres of not fiery seam. But 53,000 cubic feet is not enough; he knows it, and does not rest satisfied till he has nearly 96,000 cubic feet. His deeds far exceed his words; but in this case the responsibility was his own. At Jarrow it was that of another, and other purposes were to be served. Also, in 1844, when Haswell exploded under his management, and killed 95 people, it had 74,228 cubic feet per minute for only 500 acres; and at the inquest Farish, Scott, the underviewer, and others, stated, with more air in the place of fire, the accident would not have occurred, and Mr. Forster himself swore "with more shafts the ventilation would be more perfect;" and yet he now says that 32,000 cubic feet are enough for a working of 600 acres.

Again, Mr. Anderson, the other reporter, says 32,000 cubic feet is enough for 600 acres at Jarrow, while he himself for 400 acres, one-third fewer, at St. Hilda, is not content with 30,850 cubic feet (*Shields' Report*, p. 32), for which he has good reason, as lately the race against time to extinguish the naked lights in the mine, in order to prevent an alarming explosion from imperfect ventilation will testify, but is preparing to unite another pit, the Harton, to the Hilda workings, to give increased air. If St. Hilda then be too little at 30,000 cubic feet, Jarrow, according to the same authority, Mr. Anderson, ought with its third more workings to have upwards of 43,000 cubic feet. Yet he declares Jarrow well ventilated with 32,000 cubic feet, vibrating as it is amidst its threatening dangers. Let the world now judge.

These parties, throwing aside not only the principles of their profession, but those of their own practice, are thus publicly arraigned and self-condemned by their own acts and deeds. And that is the mine, and these are the men who have pronounced Jarrow sufficiently ventilated—"that the air passing through the mine was ample."

If justice was done to that mine, and the Government Inspector did his duty, and possessed the power, he would declare it unsafe, till like Wall's-End, with fewer workings, upwards of 120,000 cubic feet of air was pouring through its poisonous caverns and gas magazines; and even then, with skillful hands and watchful eyes, it would require, like a sleeping enemy, unceasing attention, and in many places would have still to be guarded with safety lamps. Only another shaft can do anything for this charnel-house, or the skilful adoption of the steam-jet, to render the air sufficient, as Professor Hann, of King's College, has clearly demonstrated in his able letter in the *Morning Advertiser* of the 27th January; and as the same Mr. Forster, one of our authorities, says "that to diminish the number of accidents there is no other method except by improving the ventilation—*that is the only thing.*"—(*Evid* 2550, 2551.) But now it is asserted that in a mine so ventilated, so fiery, and so fatal, "*that blasting was a process indispensable for the attainment of coal*; that the coal may be safely blasted with gunpowder, and that candles were perfectly safe in the *eastern district* of the mine, but recommended the use of lamps in the *western parts, which are liable to sudden discharges of gas.*"

Nothing can better demonstrate the incorrectness of the assertion that blasting is *indispensable* for the attainment of coal, than that in the very seam and workings, *the eastern*, for nearly five years, the coal has been worked there, in Jarrow, *without blasting*, and not a shot was fired in it, or a naked light approached it in all that time.

How is it that it was not indispensable till now? Nay, how comes it that there the lamp and the pick were only indispensable, when now it is asserted the candle and gunpowder are so? How is it that thousands of tons of coal have been absolutely so worked without blasting; and how, in the face of such facts, dare the assertion they have made be hazarded? Does the viewer of Wall's-End, with his splendid ventilation, described in my letter in the *Mining Journal*, of the 18th Jan., think it indispensable, who could, if any one could, risk shots and candles; and yet he goes on year by year working, and is satisfied with so working, without these instruments of risk in a fiery seam; the same at Willington, where this seam, as well as the whole mine, is so worked; at Springwell, at Walker also, and indeed wherever a seam of a fiery nature appears. There is no absolute loss, not even a pecuniary one, by the process, and though 1*d.* a ton, or at most 1½*d.*, appears additional at the first working, yet the quality and character of the coal are so much improved that it is more than repaid by the increased value of the coal at market. Each shot in blasting generally brings down 5 or 6 tons of coal, which is consequently shattered and broken, while by hand-working the coal is larger, preserves its bituminous and gaseous qualities longer, and is always more valued; but character of coal, or mine, seems of little consequence at Jarrow. The thought of the hour, and not the calculation for the future, seems to be the guiding principle. So important is hand-working deemed by the coalowners, that there is an article in the pitmens' bond, at their pleasure, to have recourse to.

"10. It shall be competent for the viewer of the said colliery to prevent the use of gunpowder, either wholly, or in part, at his discretion."

That assertion, then, that blasting was indispensable is entirely incorrect and baseless. "Candles safe in the eastern district" they now say, "but lamps recommended to be used in the *western* parts, which are *liable to sudden discharges of gas.*" Let us take the last first. When I state that the western district is all *broken*, or pillar working, and has been so for a length of time, it will be easily known that the invariable practice of working such a place by lamps must be adopted, and that even at Jarrow no other course could be pursued; the recommendation will look like a parade of humane caution, the better to conceal the dangerous concession to the whole coal in the eastern workings.

In addition, a physical fact connected with all coal mines, however fiery, is very coolly contradicted, and that which is not, is created as a substantial reason for their recommendation. The whole world knows that old pillar workings are not subject to sudden discharges of gas; but, on the contrary, the coal after the pillars have stood for some time has become drained of it. This fact is known from viewer to trapper, throughout all the coal districts, yet these parties are pleased indirectly to assert the contrary.

The foulness of Jarrow must have extended its operations through other workings than its own dismal recesses. "But a mongrel system of lamps, candles, and blasting (say they) are now safe in the whole coal workings of the eastern district." What element of safety is now mingled with it since 1845, when Prof. Playfair (*Report*, Sept. 30, 1845) declared that "with coal containing so much inflammable gas, the use of naked candles was far from advisable;" or since Mr. Wood, in 1849, before the Committee of the Lords, assured them (2026, 2027)—"The only way of working such mines as Jarrow with safety would be to work them *entirely* with *lamps*," which he adds "*is the practice generally in the north*; or since within a few months, where for nearly five years this working was considered so dangerous that no naked light was permitted to approach it? There is no increased safety, no more air; the mine is exactly as it was. Air has been drawn from the west pillar and other workings to render the dangerous eastern less dangerous, so that frequently in the western *the lamps* are now on fire, and the men *always working in that deleterious atmosphere*. That I suppose is not in their report. All that they have now, or had, on their view on the 9th Jan. was about 7000 cubic feet per minute in the eastern district; while two large dykes, one of 14 fms. upcast, the other of 3 fms. downcast, exist there to involve their proceedings, and convey "blowers" from distant points of the coalfield. These slip dykes abound with bags of gas and blowers. (*Commons' Evidence* in 1838, Smith, 3816; Buddle, 2161; and Wood, 847). And yet here, in this dangerous working, in the midst of slip dykes, the most dangerous point of a mine, with an air in the boards of not a foot a second, in such a situation, with an infatuation that is incomprehensible, it is determined to risk the lives of upwards of 150 human beings. And when you consider that explosions occur more frequently in the whole coal working than in the broken, as in St. Hilda, Willington, King Pit, and Jarrow, the danger will appear still more imminent.

The very last explosion at Jarrow was said by its viewer, Mr. Jobling (*Report*, 1845), to be caused by sudden discharge of gas from the coal—as that in the same mine in 1830 was also thus produced, according to Mr. Buddle; and we now have a concatenation of dangerous circumstances, that only require one more to spread around death and desolation. What the Government, the miners, or the public, may do under such a state of things I know not, but for myself I enter a solemn protest against such acts; and, at no distant day, will probably have to denounce their perpetrators before the tribunals of the country. The Government inspector, I am rejoiced to know, has done his duty. Thoroughly acquainted with this mine, I believe, for 40 years, as viewer and check-viewer, there is no man better fitted in such trying circumstances than Mr. Dunn to guide its destinies. His experience and skill will far outweigh this combination for evil; and to the evil day, conscience free, his last painful duty of bringing to justice the guilty, will have in it no personal feelings that wring the heart and hasten to the grave.

Neither an inspector nor a candidate for such office, the alarming condition of things at

Jarrow has alone wrung from me this earnest appeal, that the merciful purposes of the Government and Legislature should not be contravened, and the lives of human beings—poor industrious miners—again be sacrificed.

To you, the public and the miners are deeply indebted for the energy and ability of the opinion you have expressed upon the subject.—M.: *Feb.* 3.

SCOFFERN'S PROCESS FOR REFINING SUGAR BY LEAD.

SIR,—I cannot conceive of a question fraught with more intense or anxious interest than the process of refining sugar by lead. It is known that M. Sevier and Dr. Scoffern have obtained a patent for the refinement of sugar by employing acetate of lead and sulphurous acid; and emboldened, as it should seem by their success, F. and G. Hills, of Deptford, have applied for and obtained a patent for removing sulphuretted hydrogene, or hydrosulphite, by sulphite or carbonate of lead. These two patents I cannot otherwise view than as licences to poison. I must be permitted to call things by their right names; and I would be honest in a question which so seriously affects the health of the community.

Brande has ventured, as I think, most unadvisedly, to say—"That the objects obtained by Dr. Scoffern's process are obtained by other perfectly unobjectionable means, I cannot admit." If this expression means anything, it is granted that this process is objectionable. An individual, by name "Robert Warrington," comes to the aid of Messrs. Sevier and Scoffern, and, with more zeal than discretion, impugns the opinion of these eminent authorities—Drs. Perriera, Taylor, and Carpenter; and while he adduces no experiments whatever of his own, is pleased to say of their evidence that it is of "no value whatever"—a censure certainly most apposite when applied to the individual who has uttered it. Warrington says that several individuals have used with impunity the sugar so refined, as if that was any evidence whatever. So insidious and subtile a poison may yet eventually tell its tale. Besides, there is such a thing as *case hardening*; and what might be taken with impunity by one, may destroy another. Opium eaters resist its evil influence for a time; but succumb victims at last. And whether the story of Solyman, the sublimate eater, as recorded by Byron, be true or not, I remember to have seen the late Walter Nicol, of Edinburgh, take for a dose as much "arsenic" as would lay on the then current sixpence as a remedy for rheumatism; he fell, at length, the victim of his temerity. Warrington admits, with singular *naïveté*, that "a flaw in the filter may produce serious results!" Well may Messrs. Sevier and Scoffern exclaim, "Save us from our friends!"

It appears that Government, or its Colonial Secretary, had some "compunctious visitings of nature," and had issued its *caveat* to the colonies, whereat Scoffern complains; and in one phase of the question he has reason on his side; for it does seem "passing strange" and inconsistent, that Government should with one hand assign a patent, and neutralise its operation with the other!

A highly questionable article appeared recently in the *Eclectic Review*, advocating Scoffern's process of refining sugar by lead. The drift of the writer, as far as I could understand it, was that its tendency, if carried into effect, would be to abridge slave labour. I confess my inability to discover how this consummation is to be achieved; but Government was rudely censured for its caution. That the community should be poisoned seemed to be an incidental or subordinate question; and there is a flippant allusion to *lead* as used in parts of the machinery employed in the colonies for the extraction, &c., of sugar, just as if two blacks could make a white. Dr. Ure has very properly observed that such a material should not be entrusted to the manufacturer; and I find that M. Miranda, the Spanish Consul-General, has repudiated the use of acetate of lead for the refinement of sugar in the Island of Cuba.

The plea of Scoffern is founded on the assumption that the sulphite of lead is *insoluble*, and, therefore, *innocuous*. Dr. Golding Bird justly remarks that a body though *insoluble* may, nevertheless, be *poisonous*; and though I certainly would think it advisable to administer sulphate of magnesia as an antidote to poisoning by lead, I base this propriety on the fact that it disarms its virulence *pro tanto*, and for as much as we do not yet possess a specific for the poison of lead in our toxicology.

Mr. Greaves' experiments on three dogs, to which he administered sulphite of lead, are at once instructive and conclusive. The cases were fatal in all of them—one, indeed, lingered 30 days, but perished at last, paralysis having supervened a day or two before death. Mr. Redwood's experiments prove that sulphite of lead is not so unyielding a substance as we had been led to suppose, and that it is acted upon by hydrochloric acid and chloride of sodium, both of which are found in the system; also by carbonate of soda, lactic acid, &c. These results have been confirmed by others; moreover, we have the authority of Bischoff, Berzelius, and Pleischl, that even sulphate of lead is more plastic than we had imagined it to be, and that it is acted on by hydrochloric and nitric acids, and even citric and tartaric acids,

To free the sugar entirely from *lead* under Scoffern's process, even with the nicest care, and the aid of chemistry, is a matter of extreme difficulty—not to speak of the imperfections of ordinary processes, and the contingencies of carelessness. The subject of poisons is not with me the theme of yesterday, but the study of many years. Lead is a poison not to be trifled with, and I contend that all its salts are poisonous. They differ only in their degree of virulence, and the period of their development is a question of quantity. Doses, however small, are eventually more or less ruinous to the constitution. Surely the cases at Southampton and Claremont gave "no uncertain sound." Those engaged in the manufacture of "sugar of lead," as well as of "red lead," and in glazing earthenware, as well as the plumber and the glazier, are too frequently the spectres of paralysis, or otherwise the prey of this insidious poison, in the prostration of the vital forces. We should have the wholesome fear of these things before our eyes, and I have certainly discovered lead in one sample of refined sugar.

I have on the table before me specimens of sugar refined by Messrs. Oxland's process. These consist of "bastards"—crushed lump and refined loaf sugars. One of the specimens of the crushed lump possesses a very beautiful, sparkling, and crystalline grain. The loaf sugar is all that can be desired; and I am informed, on competent authority, that the *treacle* is less in quantity than by the ordinary process, and, moreover, does not possess that forbidding taste and flavour which is acquired from the use of *blood*—a most revolting and disgusting process. Messrs. Oxland's patent process is *entirely unobjectionable*. Their mode of refinement consists in the employment of *acetate* of *alumina*, *tannin*, and *carbonate of lime*—materials entirely innocuous. Mr. Brande's observations appear *to me*, therefore, altogether incomprehensible.

Is it safe to tamper or play with poisons? Is it prudent to try how much poison the system will bear, ere "the silver cord be loosed, or the golden bowl be broken, or the pitcher broken at the cistern?" Just as safe as it is to play with the basilisk, or prudent to provoke the asp. I conscientiously believe the danger incurred is incalculable in the amount of suffering and death that the process of the refinement of sugar by lead will entail upon the community. It is under this conviction I have treated the question without equivocation or reserve. The case is even worse with the treacle, or molasses, connected with the process.

I and my family may not suffer, for I can summon chemistry to my aid, but all are not chemists. Local authorities, the conservators of the public health, should certainly require a guarantee that the sugar sold is entirely free from lead. J. MURRAY, Ph. D.

Broadstone, Stranraer, N.B., Jan. 29.

THE STEAM-BOILER VALVE.

SIR,—In making inquiries on the subject of the "gagging" of the valves of steam-boilers, I have been told that it occurs *only* when the valve and socket are *both of iron*, and not when these are of *dissimilar* metals. If this really be the fact of the case, then it is conceivable that the electricity of steam may superinduce magnetism, and magnetism, by induction, rivet the valve to its socket. I should be glad if any of your intelligent correspondents who may have attended to this question would favour us with the results of their observations, as it might tend towards a solution of this mysterious problem.—J. MURRAY: *Broadstone, Stranraer, Feb.* 4.

ROBERTS'S PATENT "GEM" LAMP.

SIR,—I am glad that I have not been deceived in the excellences of the camphine lamp, and that it and English and Co.'s patent camphine still maintain the high opinion I gave of it in the *Mining Journal* some two years ago. There is, however, lately an *improvement* on the camphine lamp in Roberts's patent "gem" lamp, which I frankly own to you has excited in me unmingled surprise and admiration, and which I did not think the camphine lamp was susceptible of. It is calculated to yield a light equal to that of 16 mould candles! It is certainly a "gem" of diamond brilliancy. To my mind it is pre-eminent in beauty and brilliancy to any gas light whatever. Mr. Warner, of the Crescent, Cripplegate, was the manufacturer of the one I so much and so justly admired.

Jan. 27. J. MURRAY.

FORMATION OF METEORIC STONES OR ÆROLITES.

SIR,—In the second edition of my *Treatise on Atmospherical Electricity*, published in 1833, I have maintained, contrary to the generally received opinion, that meteoric stones are formed in our own atmosphere, and that they are not extra-atmospheric or cosmical. I believe them to be the birthright and offspring of the thunderstorm. The opinions which have been entertained of these rare and unusual visitants, have always appeared to me to be sufficiently extravagant and eccentric. Some have supposed ærolites to come from volcanoes in the moon!—an assumption which, without a figure, belongs to *lunacy!* Sir David Brewster, among others, has still more singularly assumed that there is, or may be, a belt or zone of meteoric stones and their fragments performing a gyration round the earth, hence the occasional vision of showers of falling stars, or precipitation of "bolides." This circulation of meteoric fragments is assimilated to the movements of the asteroids which revolve between the orbits of Mars and Jupiter, and are assumed to be the fragments of some shattered planet! So wild and romantic and visionary are the phantasies of speculative fancy and hypothesis. I am glad the sober and inductive reasoning of Dr. Ehrenberg, of Berlin, is entirely allied to my view of these phenomena, and his facts seem to my mind entirely conclusive, while they supply all the elements conditional to the curious problem.

Dr. Ehrenberg has recorded 320 species of organic forms, besides soft vegetable matter, as precipitated from the atmosphere—indeed, in the "ink rain" which fell in Ireland in 1849, the organic forms were *alive*. Whirlstorms of atmospheric dust have developed a vast variety of inorganic matter—*inter alia*, oxides of iron and manganese, silica, alumina, carbonate of lime, alkaline matter, oxide of copper, &c. I am not, however, aware that the existence of *nickel* has yet been determined.

Dr. Ehrenberg says that all the recorded falls of meteoric stones are insignificant when compared with the capabilities of the atmosphere—an assertion certainly entitled to our entire credence. Ehrenberg further observes, that the difficulty of imagining such a quantity of solid substance as is required for a meteoric stone of 1 cwt., suspended in the air, and so rapidly united, is now removed, by the fact that a single regular wind meteor has often carried thousands and hundreds of thousands of hundredweights of solid substance, and with from 7 to 14 per cent. of iron, 30 per cent. of silica, and 16 per cent. of alumina—that over the "dark sea," near Africa, being altogether incalculable.

The materials are such as belong to our own world, and are "of the earth, earthy," and the *materiel* is, moreover, abundant. The only question that can now arise is the *agency* by which they are produced—that is, by which they are agglomerated in the form in which they present themselves to our scrutiny after their fall to the earth. They have certainly no similitude or counterpart in our terrestrial mineralogy. What, therefore, are the powers and capabilities of the agent concerned in their agglutination and formation?

We can scarcely venture to assign limits to the power of atmospherical electricity. It controls chemical affinities, promotes new arrangements of aggregations, or reverses proportionals. The evidence deduced from Davy's researches, and those of others, leave no doubt on the subject. An ærial vortex, or atmospherical mælstrom, would draw into its gulf the diffused materials, and atmospheric electricity, in the plenitude of its power, consolidate the ærolite; when the new-formed meteor would be precipitated from on high. It cannot be doubted that electro-positive powers, or electro-negative influence, may be assigned either to silica and alumina; or, on the other hand, to iron and nickel, as the case may be. All this, and much more, comes within the province of electricity.

The comparatively quiet way in which these extraordinary visitants descend is entirely against their assumed cosmical origin, even on the supposition of a retardation, arising from their *spiral* movement—a mere gratuity! They have been seen to fall. Gassendi witnessed the descent of that on Mount Vaisir; and the ærolite which fell near Major Topham's, in Yorkshire, was distinctly observed, as were those at L'Aigle, in Normandy. They penetrate to no great depth, and in general are more or less superficial. I possess a specimen of meteoric iron; it is cellular, and contains nickel. I have a fragment of the meteoric stone which fell at Juvenas, an entire one from those of L'Aigle, and fragments of others; a portion of the latter was fused into a magnetic bead. The process of *fusion* does not seem to pervade the meteoric stone; externally it is (the entire one from L'Aigle) dark, and as if scorched by violent fire. J. MURRAY.

Broadstone, Jan. 28.

ON THE USE OF CAUSTIC LIME, INSTEAD OF LIMESTONE, IN BLAST-FURNACES.

SIR,—The results obtained at the Ougrée furnaces by the use of quicklime, in lieu of limestone, are very striking; and the continued success attending its use seems now to have fully established its superiority. One of the causes assigned is the absence of the cooling effects, at a low region of the furnace, from the absorption of heat by the carbonic acid during its change of state—from the solid to the gaseous. In furnaces using so large a proportion of limestone as 21 cwts. to the ton of iron, as at Ougrée, the effect on the temperature from that cause must be considerable, and tend to narrow the zone of fusion, thereby diminishing the power of the furnace in melting a certain weight of prepared material in a given time—that allowed for the combustion of a determinate quantity of fuel. Besides this, the presence of carbonic acid, as an oxidising agent, is highly objectionable in that part of the furnace depended upon for the reduction of the ores; for, as it is well known, iron at a high temperature possesses the power of decomposing it by abstracting a portion of its oxygen. Again, if the ascending current of gas is really converted into carbonic oxide by contact with the superincumbent incandescent coke, its volume will be doubled, and its capacity for heat increased—hence another source of frigorific influence on the furnace. Messrs. Bunsen and Playfair (*Report on Iron Furnaces, British Association*, 1845), however, do not show that any such change takes place during the passage upwards; and their experiments were conducted with the most scrupulous regard to accuracy. The gases were taken from a furnace fed with bituminous coal, but only 36 ft. high. Possibly the superior height of the furnace at Ougrée, 54 ft., together with the circumstance of its being supplied with coke, proved the means of subjecting the gas to a higher column of incandescent carbon, and thereby have effected the change. Ebelmen, on the contrary, gives an *increase* of carbonic acid in the upper part of the furnace; and the analyses quoted in Overman's work are in the same predicament. From these discrepancies it will be interesting to have the promised details of the examination of the gases made at Ougrée. Little attention seems to be paid to the preparation of the materials supplied to furnaces, with the exception of the ironstone—every furnaceman dreading the use of it imperfectly calcined, well knowing from experience the inability of the furnace to smelt it in the usual proportions. Yet it has passed through the kiln, and all its moisture has evaporated. What, then, can be the cause of its injurious effects on the action of the furnace?—The presence of carbonic acid with which the oxide of iron is combined, the calcination not having been carried sufficiently high to expel it. The question of temperature at the zone of fusion, also, is generally confined to what can be done in its *immediate locality*, by applying blast as hot as can be obtained with safety to the heating apparatus—it requiring too great a stretch of the imagination to conceive how a slight difference made at so distant a point as the mouth of a furnace can possibly affect its temperature at bottom. Such, however, is the fact; and one-half of the benefits conferred by the application of heated air may be easily nullified by inattention to this particular. It is not quantity of heat that we want in a blast-furnace—it is *intensity*, sufficient to create a more active play of chemical affinities in the laboratory of the furnace, and a more rapid and complete dissolution of the reduced minerals in the zone of fusion before they reach that of combustion, and become re-acted upon by the oxygen of the blast. In order to forward this desirable state of things from above, it must be considered that the temperature of the descending materials at any given point is always in *arrear* of that of the ascending current of heated gases, and will become *more so* the greater the quantity of volatile matter they contained at their introduction, whether that may be of a nature to become dissipated before they arrive at a state of incandescence—such as moisture—or after having passed that point, as the gaseous and other matters evolved during the distillation of coal, and the carbonic acid from uncalcined carbonates. The effect of these combined cooling influences is to allow the minerals, before they have attained a certain determinate temperature—say, that necessary for deoxidation or fusion—to be carried to a lower point in the furnace than otherwise would be, had they not existed. Thus the zone of fusion will have become reduced in breadth, and insufficient for performing its functions without encroaching on the zone of combustion below, with all its attendant evils—scouring cinder with loss of iron, bad yields, and inferior quality. This is not all; the supply of fuel also reaching the blast at a correspondingly reduced temperature, is now unable to give out so great a degree of heat by its combustion; and this diminution goes on increasing for some time, till an equilibrium is established. The modern domed form of blast-furnace with a wide mouth, in a great measure counteracts the above defects, by effecting the absorption of more of the heat of the ascending current of hot gases than can be obtained by the old conical narrow-topped furnace; for at a certain limited depth the capacity of the former will be found fully double that of the latter—consequently presenting *twice* the surface of minerals to the action of the gases. These, also, in passing through this enlarged region, move with only half the velocity, and, therefore, give double the time for the abstraction of their caloric. Hence it follows that by *doubling* the capacity of a furnace at the upper parts, or where the transference of heat goes on with the greatest rapidity from the continued influx of cold minerals, *nearly four times* the amount is collected and carried down by the descending masses. That narrow tops consume a great deal of fuel, is an old and general complaint; and possibly the above considerations may afford an explanation of the cause.

The theory of *conduction* upwards cannot be admitted—there not being the slightest analogy between the transference of heat from the bottom to the top of a furnace, and from one end of a bar of iron to the other. The latter is a good conductor of heat while the furnace is filled with bad ores. It would take months to convey the heat through such a disintegrated mass by conduction alone; while the passage of the gases effects it in a few seconds. Practically, the heat would never reach the top by conduction; it would be dissipated by radiation from the sides of the furnace faster than the loose matter in its interior would take it by conduction.

Ebbw Vale Iron-Works, Jan. 30. GEORGE PARRY.

PLANT'S IMPROVEMENTS IN PUDDLING IRON.

SIR,—I have been informed that Mr. Hampton, near Bridgend, Glamorganshire, puddles the iron in his works under Mr. Plant's process; if so, I shall be obliged to him, or the patentee, to inform me, through the medium of your Journal, the advantages which have been proved to arise from its use.—PHŒNIX: *Birmingham, Feb.* 6.

ATMOSPHERIC INFLUENCES.

SIR,—I am happy to say that the only objection advanced by Mr. Hopkins against my first paper, exists in his own imagination, evidently from a misinterpretation of my meaning—any such opinion as that which he attaches to me being most foreign to my thought; and I think he will find that, as I proceed, the difference between us is more imaginary than real. I shall show, in fact, that the earth must have moved northward, and that this motion was imparted to it by the magnetic condition of the north.

Chemical science, in its application to the properties of matter, has formed my study for the last 20 years; and if the order of deposition given by the geologist be not much out, I trust I shall be able, with my own inspection of districts, to submit for the consideration of your readers a GENERAL SYSTEM, based on atmospheric conditions, without doing violence to any of Nature's laws; but if it should be my misfortune to make a departure from acknowledged principles, on my restoration to the right path by any of your scientific readers, I shall be both the debtor and gainer; and if, on the other hand, I venture on questioning the opinions advanced by others, I hope that credit will be given for the sincerity of my motives. I now send you part No. 2, which was written before a perusal of Mr. Hopkins's letter, and, I hope, will satisfy him, I do not think our mineral wealth is found in the calcareous deposit on the granite. The mineral or metalliferous kingdom I shall endeavour to show followed the coal bed formation, under the influence of an oxygen atmosphere, and Prof. Faraday now admits oxygen to be highly magnetic or electric.

It ever has been the fate of the philosopher, as he progresses in his inquiries, to become intolerable to the scientific man; but as, in 1847, I ventured on submitting for his consideration the startling proposition that the poles of the galvanic battery should be reversed, although inductive reasoning was my only guide, possibly the *savans* may be induced to tolerate the publication of these papers, which, probably, will not exceed half-a-dozen, on the mere contingency, that as Prof. Faraday now subscribes to my outrages of 1847, in those of 1851, time may disclose a few pearls concealed in the heap of rubbish. FRANKLIN COXWORTHY.

Canterbury-place, Lambeth-road, Feb. 1. Author of *Electrical Condition*.

ATMOSPHERIC INFLUENCES.—NEW SERIES.

BY FRANKLIN COXWORTHY, AUTHOR OF "ELECTRICAL CONDITION."

So far as we have proceeded in this eventful history, we have endeavoured to confine our investigations within well-established principles in Nature, and properties which matter is known to possess; and we have endeavoured to show how, under the influence of these principles and properties, the foundation of lime was originally laid on the granitic base; and, as we progress, by a strict adherence to the same rule, there will be no difficulty in showing how the next formations followed in succession. These, agreeably to geological nomenclature, are the lower and upper Silurian, and the Devonian series; but as such designations convey to the mind no very comprehensive idea of their nature, we may remark, for the information of those not initiated in geological science, that they consist, the Silurian, of clay and sand, and the Devonian formation of sand only, in connection, however, with a limestone formation, having abundant traces of the lower grade of the animal kingdom; so that, philosophically viewing the question, the materials which first engage our attention are lime, alumina, and silica.

We have already considered the very peculiar property of lime, being less soluble in hot than in cold water, a property that would not fail in ensuring its rapid deposition under the conditions that existed in the first formation of the earth's crust, and we will now endeavour to show that there were other conditions which tended to increase the operation of this principle. As we ascend in the atmosphere, the mercury falls in the barometer, indicating a decreased atmospheric pressure in higher altitudes: and it is likewise established as a rule, that the boiling point of water is governed by the amount of pressure on its surface, and, therefore, the temperature of the boiling point decreases with decrease of pressure. Atmospheric pressure, under existing conditions, is about 15 lbs. on the square inch, but the atmosphere of the period which now engages our consideration, must have contained, as vapour, a great portion of the water now constituting the ocean, and, likewise, as carbonic acid, the whole of the carbon entombed in the coal bed formations; which increase of matter must necessarily have imparted to it an increase of pressure of several pounds to the square inch; and as decrease of pressure decreases the boiling point, this increase must necessarily have imparted a very high temperature to the semi-fluid mass then surrounding the globe.

There were then, at this period, in operation, two distinct forces or conditions—decreasing temperature and decreasing atmospheric pressure; and it has been admitted of late, by Professor Faraday, in his attempt to assign from Messrs. Crosse and Weekes, to M. M. Pelletier and Quetelet, their important discoveries of the electrical condition of the upper regions, and of the atmosphere, that electricity, the *cause* of chemical action and of crystallization, exercises its influence from above; but at this period the atmosphere could not have been electric, and, therefore, as it decreased in bulk, the electrical condition of the upper regions exercised an increased influence with the decrease of the intervening mass which insulated the earth from it—an increasing and powerful auxiliary to the operation of the other two conditions.

The lime, then, as observed in the first paper, deposited under the influence of a high temperature, and its powder being carried up by the steam, formed extensive valleys or pits; ultimately, however, as the temperature decreased, and the accumulation of water increased, the alumina and silica follow in their turn, each drop of condensed vapour bringing down from the upper regions its portion of electricity, which, on being imparted to the silica, constituted the grains of sand,—sand being clearly an original formation, and not the detritus of former rocks.

As we have already observed, there was at this time no change of electrical condition in the atmosphere, and, consequently, no gales of wind; and, in reference to this formation we are informed that "the prevalence of the slaty character shows that the progress of formation has not been varied by much original disturbance, and the depths of its beds indicate the probability of some portion having been a deep sea, or rather, semi-pelagic deposit;" an apparently well established conclusion, strictly in accordance with the principles we conceive to have governed this formation. And Sir R. I. Murchison observes, "we have come to the conclusion that the lowest of these beds that are fossiliferous are the *the exact equivalents* of the lower Silurian strata of the British Isles, and that they had been formed out of, and rest upon slaty and other rocks, *which had undergone crystallization* before their particles *were ground up to compose* the earliest

beds in which the remains of organic life appear;" an opinion which, while it is strikingly illustrative of the truth of our position, demonstrates, but too forcibly, the want of a directing principle in geological investigation.

Nature, in her operations, is governed by general, and not by partial laws, which render necessary the grinding up, or the destruction, of one portion of her work to form another; and what renders, in this case, the less probable any recourse having been had to such expedients is, that the upper formation, agreeably to Cotta's tables, is of greater extent than the lower, the progress of the formation not having been varied by much *original disturbance*—an essential condition to the grinding up of rocks which had undergone crystallization, but how formed does not appear.

Another opinion advanced by geologists is, that these rocks have been hardened by compression while under the influence of a high temperature; conclusion, I think, mature consideration will show to be the reverse of th. All matter that is hardened under the influence of a high tempe- ture will readily stand the action of fire, whilst substances indurated by cold or electricity decrepitate when exposed to heat. Limestone, which is acknowledged to have been formed apart from "heat," rapidly yields to the influence of fire, which has a similar action on shale, or slate, the silurian formation; and if a piece of granite be put into a crucible, and placed in an ordinary sitting-room fire, in about 15 or 20 minutes it will fall to dust, and expose to view its constituent parts, which may be thus separated from each other. In fact, the influence of fire on all these substances, and on flint, which is of more recent formation, is alike destructive to their crystallization or combination, which took place under the action of electricity. In our next we hope to reach the period of the coal bed formation, and its atmospheric changes.

LONDON AND COUNTY JOINT-STOCK BANKING COMPANY.

The annual meeting of this company was held at the London Tavern, Bishopsgate-street, on Thursday, the 6th inst., and was numerously attended.

JOHN SADLEIR, Esq., M.P., in the chair.

Mr. R. P. NICHOLS (the secretary) read the report and accounts, from which it appeared that—

The net profits for the half year ending 1850 amount to 9908*l.* 9s. 10d., out of which the directors recommended a dividend, at the rate of 6 per cent. per annum, free of income-tax, which will leave 3133*l.* 18s. 2d. to be carried to the Guarantee Fund—thus increasing that fund to 35,193*l.* 6s. 10d.

In consequence of the failure of Messrs. Nash and Neale, the directors have established a branch at Reigate, where an increasing and remunerative business is carried on.

W. C. Jones, Esq., has been elected a member of the board, in the place of J. C. Joyner, Esq., deceased.

Balance Sheet of the London and County Banking Company, Dec. 31, 1850.

Capital	£ 231,035	0	0
Reserved fund	32,059	8	8
Customers' balances, &c	2,030,238	4	3
Net profit for half-year, after payment of 11,230*l.* 5s. 9d. for interest to customers	9,908	9	10
Total	£2,303,241	2	9
Cash in hand	£ 511,024	7	4
Securities, discounted bills, &c.	1,740,688	10	0
Bank premises, freehold and leasehold	33,737	11	4
Preliminary expenses, expenses of establishing and purchasing branches	17,790	14	1
Total	£2,303,241	2	9

The CHAIRMAN said he hoped that the statement which the secretary had just read would be received by them, not merely as a brief statement, but also as a satisfactory and cheering exposition of the condition and circumstances of the bank at the close of the past year. (Hear.) In submitting to them the result, which it was now his duty briefly to place before them for their consideration, it did not occur to him that he need trouble them with many observations, for when the affairs of a public company began to progress smoothly, it might be generally remarked that directors as well as chairman could afford to be brief. (Hear, hear.) They were now fortunately in a position which enabled the directors to place the condition of the company's affairs before the proprietors in a concise, and, he hoped they would say, in a satisfactory manner (cheers); and, indeed, when a fortunate state of things arose, it was needless for chairmen to draw on their powers of speech, which was the case on this occasion. He did not like to excite in others exaggerated notions of the future condition of the bank, and he was equally averse to the expression of anything that might induce them to take a discouraging view of the past. In reference to those to whom the management had been intrusted, they ought never to forget the circumstances under which the errors of past years have arisen; because in the continued remembrance of those circumstances they would constantly have before their mind lessons of experience, which might well serve as a useful guide for the safe conduct of their bank in future. (Cheers.) It was utterly impossible for their directors to forget, even for a single week, the errors of previous years; for the proprietors well knew that they had been called upon during that period to pay on their (the proprietors') behalf the penalties of those errors. It would be quite enough to bear in mind that they had not only met those penalties, but that they had, at the same time, succeeded in so conducting the affairs of the bank as to return to the proprietors what he deemed, under existing circumstances, a large dividend, to increase their guarantee fund, and to diminish other preliminary expenses. He thought this was encouraging, and that they justified him in entertaining those anticipations which he did with respect to the future progress of their establishment. He was anxious to take this opportunity of adverting to the main principle on which the institution rested. He had always been attached to the joint-stock principle. It had been, as they well knew, applied to a great variety of enterprises in this and other countries, and necessarily and naturally it had not been always successful; but the triumphs and success of the joint-stock principle, when interwoven with the fortunes and progress of banking institutions, had been signal. (Cheers.) And no doubt much of the success which had attended their efforts, and the progress of the bank were attributable to the support of, and the manner in which the proprietors and the customers of it had appreciated and relied on the joint-stock principle. (Hear, hear.) Perhaps it was to our insular position that he ought to attribute the circumstances, that we were, nevertheless, slow to adopt great principles which had been developed and tested by other nations and other races. But, at all events, we ought to be quick and energetic in imitating the example of our neighbours and fellow-subjects in Scotland, who were remarkable for the persevering spirit with which they continued to rely on, and to extend the joint-stock principle as applied to banking. He would ask the meeting to look upon and to admire the spirit and the feeling which had interwoven themselves with everything that appertained to commerce, to trade, and to agriculture, in Scotland as regarded joint-stock banking. Of his own personal knowledge, he could say that, not merely in Scotland, but in other portions of the United Kingdom, the prosperity and the present wealth, not only of individuals whom he could name—not merely of towns which were well known to all of them; but that the present wealth and prosperity, intelligence, and moral bearing of entire districts, were mainly attributable to the operation and development of the joint-stock principle as connected with banking. There was not, from the highest of those who were the descendants of the chieftains of Scotland, to the most humble cotter tenant throughout the country—there was not a merchant, trader, or agriculturist, who did not feel that his individual prosperity and welfare was inseparably mixed up in the prosperity and welfare of some joint-stock bank. It would be difficult to find a Scotchman in his own country who did not possess a deposit receipt or a joint-stock bank pass-book. (Cheers.) Much was heard in this country of the importance and value of introducing into it the Scotch system of banking, but unfortunately many Englishmen to whom he had spoken on the usefulness of that system, had fallen into the error of imagining that it simply meant the opening of some bank for the purpose of enabling the public to overdraw their accounts. (Hear, hear.) With the growth and extension of that system the necessity of altering the laws of debtor and creditor forced itself on the public, and in Scotland those laws had been so altered as to act harmoniously with the extension of legitimate banking through the instrumentality of the joint-stock principle. And when the people of this country began correctly to appreciate, as the people of Scotland had long since done, the importance of planting among themselves the joint-stock principle of banking, an alteration in the laws of debtor and creditor would become so apparent as to render the demand for reform in them irresistible. (Cheers.) He trusted that in making these observations he should not be misunderstood, and that it would not be thought that in pointing out the advantages of joint-stock banks he had any wish to disparage those of a rival principle, for for the meeting knew well that, contemporaneously with the growth of the former in this great country, we had amongst us, happily, private banks, whose wealth and whose business habits justly entitled them to the large amount of public confidence and support which they received, and it was in no jealous spirit or mean rivalary that he had made these observations. (Hear, hear.) It was well known that a large portion of their (the London and County Joint-Stock Bank's) customers were the provincial trader and agricultural classes; and without at all mooting the question as to the extent of public benefit which might result from the alterations that had been made in reference to the importation of food into this country, all parties were agreed that the immediate consequences of recent legislation had been to place the agricultural classes, and those small trading classes in more immediate connection with them, in very embarrassing and difficult circumstances. (Hear, hear.) No man practically acquainted with agricultural operations, or the actual condition of agriculturists, could fail to see that, although one of the ultimate results of our free-trade legislation might be to diminish the annual rental of estates, that that effect reached the owner of the land through the sides of the occupier; and that when the occupier of land found himself in circumstances where a great and sudden depression of agricultural produce took place, it was, as all must acknowledge, accompanied by great personal embarrassment in many instances. It was very unlike the case of a large speculator or merchant, who might find himself suddenly with a large stock of some article, the value of which was suddenly changed by the removal of some particular tax. (Cheers.) In the latter case a number of opportunities was certain to arise almost immediately to enable that party in a great measure to recover himself, but it was very different with the agriculturist. There was a strong spirit and desire on the part of the agricultural classes to meet manfully and scrupulously every engagement, and he constantly found that spirit and that anxiety forcing the agriculturists—inclined to hope against hope—to trench on their own capital, and evincing a great desire, founded on sanguine anticipations of future re action, to encroach on that of the bank; and he hoped that he had the support of the proprietors in the anxiety which the board had shown to be more careful that the bank should be no parties to assist them in a matter so dangerous, and fraught with so much injury to the establishment. (Hear.) But, on the other hand, he was bound to say that in this period of transition there was a large portion of the agricultural classes in the district with which they were connected who had had the good sense to preserve their capital intact, and the present position of this bank was a corroboration of the fact he had stated. The staff of inspectors had been increased, to provide against any difficulties, and by an arrangement amongst the directors two members of the board would be in daily attendance. The directors, in taking upon themselves the election of Mr. Jones, in the place of their late friend, Mr. Joyner, had done so on condition that Mr. Jones should consider his election as entirely dependant on the approval of this meeting; and he begged to say, that if any gentleman was now proposed in his place, Mr. Jones would make an arrangement to retire. (Cheers.) Their deed was similar to that of the London and Westminster Bank, but if the proprietors deemed it necessary to alter it, so as to place more power in their own hands, the directors were quite willing to abide by their wishes and take measures accordingly. (Cheers.) The chairman, in conclusion, moved that the report and accounts be adopted, and printed for the use of the shareholders.

Mr. FAITH (the deputy-chairman) seconded the motion.

Mr. COLHOUN made some observations in favour of the principles of the bank and the good management of the directors.—The report was then agreed to, as well as the dividend of 6 per cent., unanimously.

J. W. Deacon, Esq., J. A. Durham, Esq., and John Sadleir, Esq., M.P., were re-elected directors.—Robert Escombe, Esq., Henry Overton, Esq., and John Wright, Esq., were elected auditors.

Mr. ESCOMBE, in rising to return thanks for the honour conferred upon him, assured the proprietors that his best exertions should not be wanting to fulfil the expectations of the shareholders. He did not look upon the office as one that was merely honorary; and they might, therefore, rely in his carrying out practically all the duties of an auditor. (Cheers.) He was much gratified at hearing such a lucid statement from the chairman, in respect to the state of the bank; for he was satisfied that it must eventually become second to no other establishment of the kind.—The annual sum of 1000*l.* was then agreed to be added to the previous remuneration of the directors, to whom, as well as to the chairman, a very complimentary vote of thanks was passed unanimously.

The CHAIRMAN, in returning thanks, said the number of accounts opened during the past year had increased to the large extent of 20 per cent, which, he thought, was very gratifying. (Hear, hear.)

A vote of thanks was then passed unaminously to Henry Luard, Esq., the general manager, the secretary, the inspector, the branch managers, and to the accountant.

Mr. LUARD, in returning thanks for the honour paid to him and his colleagues, said the duties that devolved upon the affairs of the bank were certainly of an onerous nature; but he was happy to say that they were performed with cheerfulness, which he attributed to the friendliness of feeling shown by the board of directors towards their officers. (Hear, hear.) In justification of what he had stated, he could mention that the directors had increased the salaries of many of the officers of the establishment—the junior branches more particularly—to the extent on the whole of 1500*l.*

After a vote of thanks to the chairman, the meeting separated.

LONDON AND COUNTY JOINT-STOCK BANKING COMPANY.—PARENT ESTABLISHMENT, 21, LOMBARD-STREET.

DIRECTORS.

JOHN SADLEIR, Esq., M.P., Chairman.

JOHN GRIFFITH FRITH, Esq., Deputy-Chairman.

William Cory, Esq.	Robert Keating, Esq., M.P.
James William Deacon, Esq.	John Henry Lance, Esq.
James Andrew Durham, Esq.	James Rhodes, Esq.
Swynfen Jervis, Esq.	Richard Springett, Esq.
William Champion Jones, Esq.	John Wheelton, Esq.

General Manager—Henry Luard, Esq.

46

At the ANNUAL MEETING of proprietors, held on Thursday, the 6th February, 1851, at the London Tavern, Bishopsgate-street,

JOHN SADLEIR, Esq., M.P., in the chair,

The following Resolutions were severally proposed and unanimously adopted:—

1. That the Report be received and adopted, and printed for the use of the proprietors.
2. That a dividend, at the rate of 6 per cent. per annum, be declared upon the capital stock of the Company, clear of the income tax, for the past half-year, payable on and after Monday, the 17th day of February inst.
3. That the balance of £3133 18s. 2d., remaining to the credit of the Profit and Loss Account, be carried to the Guarantee Fund.
4. That the thanks of this meeting be given to the Chairman and Board of Directors, for the able manner in which they have conducted the affairs of the Company during the past year, and that the annual sum af £1000 be added to their present remuneration.
5. That an allowance of £100 per annum be made to the Directors acting as Trustees of the Company, the same to take effect from the 1st of January, 1849.
6. That the thanks of this meeting be presented to the Auditors of the Company.
7. That Robert Escombe, Esq., Henry Overton, Esq., and John Wright, Esq., be elected Auditors for the current year.
8. That the thanks of this meeting be presented to Henry Luard, Esq., the General Manager, the Secretary, the Inspector, the respective Branch Managers, and the Accountant, for the zeal and ability with which they have discharged the duties of their offices.

The ballot for the election of three Directors having been proceeded with, the following gentlemen were unanimously re-elected:—James William Deacon, Esq., James Andrew Durham, Esq., and John Sadleir, Esq., M.P.

(Signed) JOHN SADLEIR, Chairman.

The Chairman having quitted the chair, it was resolved, and carried unanimously,—That the cordial thanks of this meeting be presented to John Sadleir, Esq., M.P., for his able and courteous conduct in the chair. (Signed) J. G. FRITH.

Extracted from the minutes. (Signed) R. P. NICHOLS, Secretary.

LONDON AND COUNTY JOINT-STOCK BANKING

COMPANY.—Notice is hereby given, that a DIVIDEND, at the rate of 6 per cent. per annum on the capital stock of the Company, for the half-year ending the 31st Dec., 1850, will be PAID to the proprietors, either at the Parent Establishment, 21, Lombard-street, or at any of the Company's Branch Banks, on and after Monday, the 17th of February inst. By order, HENRY LUARD, General Manager.

21, Lombard-street, Feb. 5, 1851.

4

WEST UNITED HILLS COPPER MINE, ILLOGAN,

CORNWALL.—Divided in 1110 shares.

Conducted on the "COST-BOOK SYSTEM," under the Superintendence of a Committee of Management in London.

40

This MINE is situate in the parish of ILLOGAN, the richest mining parish in Cornwall; the sett is extensive, being about 400 fathoms from east to west on the course of the lodes, and about 500 fathoms from north to south, and is held under lease, dated the 25th March, 1847, for a term of 21 years, from the representatives of the late J. Basset, Esq., at 1-15th dues.

The present Company commenced operations on this mine in July, 1844, and from that time to the present have expended between £3000 and £4000 in sinking shafts, driving levels, and the purchase of a steam-engine, with boilers, &c., complete, for draining the mine under the adit, at which level operations have been hitherto carried on. An adit level has been driven from south to north, for a distance of about 380 fathoms, by the present adventurers, which has intersected several large and promising copper lodes, and a lead lode, which give every promise of making ore in depth, but cannot be wrought without a steam-engine, which is purchased and paid for, but has not yet been erected.

In consequence of several of the adventurers being in arrear of costs, and unable to incur their proportion of the further expence absolutely required for the developement of the mine, they have placed their shares in the hands of the committee, who now beg to offer them to the public at the rate of £5 per share, which will be expended in erecting the steam-engine, and in prosecuting the mine.

For further particulars application may be made to James Nicholson, Esq., No. 90, New Bond-street, London; or to T. H. Tilley, Esq., the purser, at Falmouth.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

19

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

ROYAL COLLEGE OF CHEMISTRY,

OXFORD-STREET, LONDON.

THE PRACTICAL COURSE OF INSTRUCTION IN THIS INSTITUTION

Is under the direction of Dr. A. W. HOFMANN and Assistants.

The SUMMER SESSION will COMMENCE on MONDAY, the 10th of March next, and End on Saturday, the 26th of July, 1851.

The FEE for Students working every day during the session is..... £15 0 0

four days in the week is	12	0	0
three days in the week is	10	0	0
two days in the week is	8	0	0
one day in the week is	5	0	0

Hours of Attendance from Nine to Five.

50

Further particulars may be obtained on application at the College.

SCHOOL OF MINERALOGY, CHEMISTRY, AND GENERAL SCIENCE.

MESSRS. NESBIT'S ACADEMY,

No. 38, *KENNINGTON-LANE, LAMBETH, NEAR LONDON.*

51

In this SCHOOL, in addition to all the branches of a good education, EVERY FACILITY is AFFORDED for obtaining a knowledge of ANALYTICAL CHEMISTRY and NATURAL SCIENCE, as applied to the Arts, Manufactures, and Agriculture.

The pupils are practically taught in the Laboratories, which are fitted up with every essential for the most extensive chemical investigations.

Mr. Nesbit's works on Land Surveying, Mensuration, Gauging, Arithmetic, English Parsing, &c., may be had of all booksellers.

References.—Dr. D. B. Reid, F.R.S.E., &c., House of Commons, Westminster; R. Prosser, Esq., C.E., Birmingham; J. L. Bullock, Esq., Editor of *Fresenius's Chemical Analysis*, Conduit-street, Regent-street; J. Gardner, Esq., M.D., Editor of *Liebig's Letters*, &c., Mortimer-street, Portland-place; and W. Shaw, Esq., Strand, London.

BICKFORD'S PATENT SAFETY FUSE.—The Patentees

of the ORIGINAL, and only real, SAFETY FUSE, beg to inform Merchants, Mine Agents, Railway Contractors, and all persons concerned in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder The Safety Fuse is now protected by a Second Patent, and manufactured by greatly improved machinery.

BICKFORD, SMITH, DAVEY, Camborne, Cornwall.

53

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.

E. J. DENT, 82, Strand; 33, Cockspur-street; 34, Royal Exchange (clock tower area), Watch and Clock Maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

55

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, *STRAND, LONDON.*

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due egard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

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Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

54

APPLEDORE SILVER-LEAD AND COPPER MINE,

ST. IVE, CORNWALL.

Divided into 1024 shares.—Dues One-Fifteenth.

CONDUCTED ON THE COST-BOOK PRINCIPLE.

COMMITTEE OF MANAGEMENT.

GEORGE RICH, Esq., Pimlico.
GEORGE BATTERS, Esq., St. John's Wharf, Westminster.
THOMAS TORKINGTON, Esq., Gravesend.

BANKERS—Devon and Cornwall Bank, Liskeard; Barclay, Bevan, and Co., London.

PURSER—Edward Anson Crouch, Liskeard, Purser of West Caradon.

MANAGING AGENT—Robert Dunstan, Captain of West Caradon.

This sett is granted by Wm. D. Horndon, Esq., at 1-15th dues, and extends about a square mile, and near to the most productive silver-lead mines in the county—namely, Wheal Mary Ann, Trelawny, Venton, Trehane, and other rich and dividend-paying mines. There are five parallel lodes running through this sett, and two copper lodes—the former are from 3 to 12 feet through, composed of rich gossan, mundic, candled spar, flookan, peach, prian, with spots of lead, in a light blue killas, being most congenial for silver-lead, and every indication to warrant a rich deposit of ore in depth. The metalliferous district of this sett, together with the relative position which it bears to the rich and productive silver-lead mines in this neighbourhood, is too well-known to require further description than given in the following

REPORTS:

Jan. 18.—In accordance with your request, we yesterday carefully inspected one portion of this sett, which we found to be very extensive. We saw one strong, regular, and well-defined lode, running north and south; its width is about 2½ feet, its underlie east, and although it does not produce so much gossan, where opened, as is seen in some lodes, the stratum of ground in which it is located is very congenial for silver-lead, and the situation is extremely favourable, as the lode by its underlie falls into a large concave valley—the stratum of which is a soft clay-slate, in which experience has taught us our most productive and profitable lead mines exist. We ought not to omit to state, that we were told by others, that there are two other lodes discovered in this sett, but the heavy rains which fell at the time we were there, and the late hour of the day, prevented our examining the whole sett. So, to conclude, we beg to state, that taking the sett in all its connections, first, a large strong north and south lode, which is situate in a stratum of ground very congenial to the metal sought; and after looking at what we deem the leading features of this sett, we do not hesitate to state that but few new concerns present more of what is considered promising indications than is to be seen at Appledore, and as such we have no hesitation in stating that it holds out considerable promise of making a large and good mine. The sett is extensive, and the neigbourhood, Callington, one of mining celebrity.

JAMES OSBORN, Wheal Venton.
HENRY HODGE, Wheal Mary Anne

Jan. 27.—Having recently inspected, or rather surveyed, this sett, I beg to hand the following report thereon:—This sett, which is very extensive, is situate in the parish of St. Ive; it lies on the western side of the River Lynher, and directly south of Bicton Wood Consols, the north and south lodes in this sett, Appledore, being a continuation of the eastern lodes in Bicton, where they have been traced to some considerable distance, and present very fine appearances in this sett, and also, where opened on the backs, show themselves to be large and well-defined, being composed of gossan and quartz, and located in a beautiful soft killas, which is in every respect congenial to the produce of lead. There is also an east and west lode, the appearances of which are well worthy of attention, and from the backs lead is said to have been taken. Judging from the whole of the features of this sett, as far as a surface survey can admit of, I deem it well worthy of an effectual trial, but I should recommend, as preparatory to any permanent operations, that the lodes be opened on the backs throughout the sett, in order that their character and relative position may be more clearly ascertained, and the best spot selected for commencing effectual operations.

ROBERT DUNSTAN, West Caradon Mine.

Jan 30.—In conformity with my promise to you, I yesterday inspected that portion of this sett which I had not before seen, and am happy to inform you that I saw another large north and south lode, which produces fine gossan, is situated in a stratum of soft clay-slate, and it is said intersected by a caunter lode, near the spot where I saw the principal opening; but as the pits said to contain the caunter were not cleared up, we, of course, could not state what is in them. But I can, without hesitation, say the north and south lode is one of considerable promise, being of a good size and appearance, quite in a lead district, having the Callington lead mines on one side, and the Menheniot ones on the other, and this being situated about midway between both, gives it a favourable position, and the appearance of the lodes and the general strata being the same as in those mines, I see no reason why the same causes will not produce the same effects. Fully aware that we cannot divest mining of the uncertainty which attaches to it, and equally certain that experience has taught us many things that serve for guides (though not infallible) in forming our judgments and directing our operations, and as far as I can see in it, appearances are strongly indicative of a productive mine at Appledore.

JAMES OSBORN, Wheal Venton, Liskeard.

The testimony of the above experienced and well-known agents, and now managing, two of the most productive and best dividend-paying mines in this locality, is sufficient guarantee for the favourable results likely to ensue.

Application for the remaining shares (two-thirds having been already apportioned) to be made to Thomas Fuller and Co., Threadneedle-street, London, where every information may be had, and plans and specimens seen.

35

TREMAR COPPER MINE—ST. CLEER, CORNWALL.

In 1024 shares.—Deposit £1 per share.

PURSER—Mr. WILLIAM CHANNING, 7, South-street, Exeter.

MANAGING AGENT—Captain Rule.

BANKERS—West of England and South Wales District Bank, Exeter.

SECRETARY—Mr. J. Jury, Exeter.

36

OFFICES—3, CASTLE-TERRACE, EXETER.

This MINE is situate in the parish of ST. CLEER, near Liskeard, adjoining and parallel to the South Caradon Mines, whose riches are almost unequalled; and the vast profits realised by the fortunate adventurers are too well known to need comment—£5 per share was only expended when they came to enormous riches. It also nearly adjoins the justly celebrated and very profitable West Caradon Mine, being situated a little more than a quarter of a mile south thereof, with lodes running parallel, and near the junction of granite and killas—a point well-known to miners to be productive; with a constant supply of water for dressing purposes, and other natural advantages, which makes it a more desirable speculation than any other in this favourable mining district.

The sett is extensive, and through which, running east and west, from half to three-quarters of a mile, many very large and promising lodes have been discovered, together with the West Caradon great cross-course, extending from north to south, throughout the sett, and in the very centre of the mine.

An adit level has been driven north, from 70 to 80 fathoms, and has intersected three east and west lodes, averaging 2 to 2½ feet wide, producing good stones of yellow ore; in the present end also the lode is 2 ft. wide, of the same splendid appearance and character as that of the South and West Caradon.

A shaft has also been sunk about 5 fathoms, on a lode of the same kindly appearance, 2 feet wide, with very regular walls. The gossan, peach, prian, black and yellow copper ore, are of a very rich description.

It now, therefore, only remains necessary to erect a 40-inch cylinder steam-engine, with pumps, &c., and sink the shaft to a moderate depth, the estimated costs of which are about £1500. When this is accomplished, there can be very little doubt but the shareholders will congratulate themselves on the stability and very profitable nature of their adventure. For, as a proof of the opinion entertained, and the high estimation and value placed on this mine, the South Caradon adventurers have secured to themselves 424 shares out of the 1024 to be allotted.

In order, therefore, to carry out this undertaking in a *bonâ fide* and equitable manner, together with a view to the strictest economy, it has been determined to proceed with the works with all possible speed, for the purpose of developing the riches which all competent judges who have seen it unhesitatingly declare EXIST in the Tremar Copper Mine.

The future calls will not exceed 10s. per share, and it is confidently anticipated that £4 per share only will be required. There are to be no free shares—£300 are to be paid for the work already done, for the sett, and all preliminary expenses. The dues to the lord are 1-15th.

REPORTS.

Dec., 1850.—We find your sett is extensive, being about half a mile square. The stratum of ground through which your principal lodes run is a soft killas, or clay-slate, a little south of the junction of the killas and granite strata, and nearly parallel with those which have proved so productive in the immediate neighbourhood (Caradon). There seems to be several lodes in the sett, but two only are sufficiently opened to justify us in speaking of. The south lode, opened in the field, is about 2 feet wide, almost wholly composed of a very fine gossan, presenting as promising an appearance as it has ever fallen to our lot to observe so near the surface. The north lode is cut in the adit, and explored a few fathoms east of the cross-cut; is large in the east end, produces stones well spotted with yellow copper ore, and will probably prove a productive lode in depth; its appearance at present warrants such a belief, and our advice to you is to prosecute the mine with vigour, having a strong hope that you will be amply rewarded for your outlay.

J. OSBORN, Wheal Venton.—H. TAYLOR, West Caradon Mine.

South Caradon Mine, Dec. 2.—We have visited Wheal Tremar, and find an adit level extended north from 70 fathoms to 80 fathoms; there are three east and west lodes to be seen in this adit; on the course of one of them, a lode 2 feet or 2½ feet wide—a level has been driven east about 20 fathoms, throughout the whole of this distance; the lode produces stones of good yellow ore; and, considering the depth (not being more than 6 fms. deep) it has altogether a promising appearance; and in the present end is about 2 feet wide, of the same kindly character. The lode you have cut and sunk the shaft on, in the field, is about 2 feet wide, with very regular walls, and in a nice channel of killas, not far from the granite. We consider the concern a fair speculation, and would advise you to prosecute its developement with all possible speed, as the indications are quite as good as can be reasonably expected at the depth.—R. DUNSTAN, West Caradon Mine.

OLIVER O. TREWREN, South Caradon.

It is believed that very little more than £4 per share will be required before the mine is in profitable work; and as more than one-half of the shares are already taken up by highly respectable shareholders, an early application to secure a portion of the remaining is necessary—addressed either to the purser, 7, South-street, Exeter; or the secretary, at the office of the company, 3, Castle-terrace, Exeter; at Messrs. Syms and Co., mining sharebrokers, Tavistock; Mr. James Crofts, 4, King-street, Cheapside, and J. S. Tripp and Co., Lombard-street Chambers, Clement's-lane, London; Messrs. T. W. Flint and Co., Hull; Mr. Isaac Ironside, Sheffield; and Mr. John Davies, 38, Tower-buildings, Liverpool

COUGHS, ASTHMA, AND INCIPIENT CONSUMPTION

are EFFECTUALLY CURED.—KEATINGS'S COUGH LOZENGES have been proved by long experience to be equally efficacious and powerful in those severer forms of pulmonic affections—asthma, incipient consumption, chronic bronchitis, and spasmodic cough—as in the milder, but often not less troublesome disorders of the throat and chest, winter cough, hoarseness, difficulty of breathing, and irritation of the throat, &c. Their entire freedom from all deleterious ingredients and opiates, whilst it renders Keating's Cough Lozenges a safe remedy for the most delicate female or youngest child, has caused them to be held in the highest esteem by public speakers, clergymen, and professional singers; but, perhaps; the high approval which is bestowed upon these lozenges by some of the most eminent of the faculty, is the best and most convincing guarantee of their safety, efficacy, and purity.—Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by Thomas Keating, Chemist, &c., No. 79, St. Paul's Churchyard, London. Sold retail by all druggists, and patent medicine vendors in the kingdom.

IMPORTANT TESTIMONIAL.

Church-street, Folkestone, Nov. 22d, 1848.

SIR,—Having been troubled with a very bad cough for the last eight months, I applied to Mr. Hammon, chemist of this town, for some relief; he recommended me your "Cough Lozenges," which I am happy to say cured me in a week. I beg most cordially to recommend them, and request you will not hesitate to make this letter public; such a valuable remedy cannot be too highly recommended. JOHN HILL, Bart.

PRICES OF MINING SHARES.

It being difficult to obtain a correct knowledge of all the mines in our list, we trust that agents, and others interested, will assist us, by forwarding any additions, or corrections, with which they may be acquainted—our object being to present it as accurate as possible. We have also added a column to note the actual business transacted; but which, without the constant assistance of brokers and agents, cannot become so complete as we could wish. The desirability of such a record is generally admitted, and we invite the co-operation of all parties concerned, in rendering it perfect.

Shares.	DEVON DISTRICT.	*Paid.*	*Last Price.*	*Transactions.*
2000	Aylesborough (tin), Sheepstor	2	2	
4000	Bedford United (copper), Tavistock	2⅝	6½ 6¾ 6⅞ 7	6⅞ 7 7½
1280	Birch Tor and Vitifer (tin), Dartmoor	10½	4	
1024	Borringdon Park (silver-lead), Plympton	¼	3½ 4	3½ 4⅞ 5½
4060	Davon and Courtenay Consols (copper)	1½	⅛ 1	¼
1024	Devon Great Consols (copper), Tavistock	1	270 75 280	280
768	Devon Great Tincroft, North Bovey	¼	6	
250	East Birch Tor (tin), North Bovey	3	3	
2048	East Crowndale (tin), Tavistock	7½	2	
4000	East Gunnis Lake Junction (copper)	¼	1 1½	1½ 1
9000	East Tamar Consols (silver-lead)	1½	1½ 1½	1½
2048	East Wheal George (cop.), Walkhampton	1	10	
512	East Wheal Josiah (copper), Tavistock	1½	⅜	
4000	East Wheal Russell (copper), Tavistock	¼	5 6 6½	
1024	Exmoor Eliza (copper), South Molton	2½	5	
1500	Hennock (silver-lead), Hennock	2½	2½	3½
1024	Kingsett and Bedford (lead and copper)	3½	3½	2½
1742	Lamheroos Wheal Maria (copper & tin)	11½	10	
1024	New East Crowndale (copper and tin)	2	2	
1024	North Wh. Robert (copper), Walkhampton	2	2 2½	
1000	Peter Tavy and Mary Tavy (copper)	2½	8	
512	Plymouth Wheal Yeoland (tin), Plymouth	6¼	6	
2048	Runnaford Coombe (tin)	2⅞	3½ 4	
256	South Friendship Wh. Ann (copper & tin)	30	28 30	
256	South Molton (lead)	12½	12½	
1024	South Plain Wood (copper), Ashburton	3⅛	7	7
9000	South Tamar (silver-lead), Beer Ferris	1	2½ 2½ 2½	2½ 2⅝
9600	Tamar Consols (silver-lead), Beeralston	4	6½ 6	6
687	Tavy Consols (copper), near Tavistock	8	3 3½	3
1024	United Mines (copper and tin), Tavistock	10	10	
1024	West Downs (copper and tin), Whitchurch	2	1½	
1524	West Wheal Friendship (copper)	3	2½	
4000	West Wheal Russell	¼	⅜ ½	
1070	Wheal Adams (lead), Christow, Exeter	13½	16	
1024	Wheal Carpenter (tin & cop.) S. Sydenham	1	1½	1½ 1⅝
1024	Wheal Crebor (copper), Tavistock	2½	3½ 3½	3½ 4⅝ 4⅝ 5
1024	Wheal Emily (antimony and lead)	3	6	
1024	Wheal Fortescue (copper), Tavistock	4½	3 3½ 5	
764	Wheal Franco (copper), near Tavistock	13½	13 14	13
126	Wheal Friendship (copper)	120	120	
1024	Wheal Hamlyn, near Oakhampton	¼	1	
2048	Wheal Harris (lead), near Tavistock	⅜	1 1½	1
2000	Wheal Langmaid (lead)	⅛	1½ 1⅝	
1024	Wheal Mary Ann (copper), Bridestow	—	1½	
5000	Wheal Providence, South Sydenham	¼	2½ 2½ 3	2½ 4
1024	Wheal Russell (copper), Tavistock	4	3½ 4 6½	6½
	EAST CORNWALL DISTRICT.			
	FOWEY, CALSTOCK, LISKEARD, ST. AUSTELL.			
3650	Bawden (silver-lead)	¼	⅛ ⅜	
256	Berrlow (copper), Liskeard	2½	5	
1024	Bodmin Consols (lead), Wadebridge	4	4	
5000	Bodmin Moor Consols (tin and copper)	1	4½	
—	Bodmin Wheal Mary (copper)	5	6½	
466	Butterdon (lead), Menheniott	1½	8½	
1000	Callington (lead and copper), Callington	28	8½ 9½	
4000	Calstock United (copper)	5	5	
1168	Caradon Great Cons. (cop.), Linkinhorne	7	3	
1536	Caradon Vale (copper and lead), St. Ive	1⅞	1⅝	
3000	Carthew Consols (cop. & lead), Wadebridge	4	7	
500	Comblawn (lead), Callington	8	—	
1000	Coombe Valley Quarry (slate), St. Ginnis	5	2	
211	Craddock Moor (copper), St. Cleer	28½	7	
2560	Drake Walls (tin and copper), Calstock	6½	2½ 3½	3
—	Duke of Cornwall	3	3	
1024	East Polgooth (tin)	6	7½	
1024	East Sharp Tor (copper)	5	8	
1000	East Trescoll (tin), Lanivet, near Bodmin	1	2	
256	East Wheal Rashleigh, Lonreath	—	10	
494	Fowey Consols (copper), Tywardreath	40	30	▼
256	Gonamena (copper), St. Cleer	46	15	
1024	Great Sheba Consols (tin and copper)	2	10½ 12 13	13
5000	Great Wheal Martha (cop.), Stoke Clims.	—	1	
3072	Great Wheal Mitchell Cons. (cop.), Lanivet	3	5	
512	Gt. Wh. Rough Tor Con. (cop.), Camelford	29	20	
6000	Growa Slate Company, Camelford	5	5	
1024	Hawkmoor (cop.), Calstock, Gunnis Lake	5	17	
6000	Heignston Down Con. (copper), Calstock	2½	4	4
512	Herodsfoot (lead), near Liskeard	27	12 12½	
1000	Holmbush (lead and copper), Callington	24	22 24	23 24
6000	Marke Valley (copper), Caradon	10	3½	
256	Mineral Court (tin), near St. Austell	22½	50	
1024	Moditonham & Marrabro' (copper & lead)	1½	2½ 3	
256	North Fowey Consols	—	25	
1024	Okel Tor (lead)	1⅛	4½	
128	Par Consols (copper), St. Blazey	55⅛	650	
406	Penhauger	1	6	
2048	Pentire Glaze (silver-lead), St. Minver	5	8	
200	Phœnix (copper and tin), Linkinghorne	—	240	
5000	Roche Rock (tin), Roche, near St. Austell	1	1	
5000	Rocks and Treverbyn (tin), St. Austell	4⅛	5	5
256	South Caradon (copper), St. Cleer	30	115	
256	South Trelawny (lead), near Liskeard	31	7½	
256	South Wheal Josiah (copper), Calstock	2	4	
999	St. Minver Consols (silver-lead)	1	6	
128	Tokenbury (copper), St. Ive, Liskeard	8⅛	8	
2048	Trebell Consols (tin and copper), Llanivet	1½	1½	
512	Treburget United (lead), St. Teath	1	—	
600	Tregardock	1	5	
5000	Tregear Consols (antimony & silver-lead)	1	—	
256	Tregorden (silver-lead) Wadebridge	10	7	
256	Trehane (silver-lead), Menheniot	1½	18 15	
512	Trethevy (copper), St. Cleer	7	7	
512	Treville (lead), Lewanick	1⅞	6 7	
5000	Warleggan Consols (copper)	⅛	⅜	⅛ 1
256	West Caradon (copper), Liskeard	20	105 6 12½	110 115
512	West Fowey Con, (tin & cop.), St. Blazey	40	60	
1024	West Par Consols (copper), St. Blazey	10	11	
1024	West Phœnix, Linkinghorne	3	4	
2800	West Polgooth (tin), St. Ewe & St. Mewan	5	3	
1225	Wheal Arthur (copper), Calstock	1	1	2
1024	Wheal Bray (copper), Alternum	11½	—	
2324	Wheal Calstock (copper), Calstock	9	9	
3000	Wheal Dora (tin and copper), St. Cleer	3	3½ 4	
182	Wheal Ennis (lead), St. Erme	12	20	
1000	Wheal-an-Grose (tin), St. Columb Major	5	5 6	
256	Wheal Kingston (copper and silver-lead)	¼	1	
6000	Wheal Langford (copper and silver-lead)	⅛	2½	
1024	Wheal May (silver-lead and copper)	1⅛	1½	
512	Wheal Mary Ann (lead), Menheniot	5	65 6 7½ 70	65 6½ 7⅛ 8
3000	Wheal Penhale (lead and copper)	2⅝	6	5½
1056	Wheal Sarah (silver-lead), St. Kew	5	—	
512	Wheal Sophia (silver-lead), Lezant	7	7	
512	Wheal Spry (copper and lead) St. Columb	⅜	1	
—	Wheal Tom (tin & copper), Stoke Clims.	5	7	
1100	Wheal Trescoll (tin), Lanivet, Bodmin	8	6	
520	Wheal Trelawny (silver-lead), Liskeard	3½	55 56 57	56 57 58
256	Wheal Tremaine (copper), St. Ervan	11	2½	
1024	Wheal Venton (silver-lead), Liskeard	3⅝	8½ 9	
910	Wheal Vincent (tin), Alternum	7½	6½	
128	Wheal Violet (tin and cop.), St. Stephens	5	5½	
184	Wheal Vyvyan (cop. & tin), Constantine	60	60	
	ST. AGNES, NEWLYN, AND PERRANZABULOE.			
107	Budnick Consols (tin), Perranzabuloe	52½	10 11½	
128	East Tywarnhayle (copper), St. Agnes	5	8½ 11	
512	East Wheal Leisure (copper)	8	21	18 20 21
128	East Wheal Rose (silver-lead), Newlyn	50	575	
262	North Wheal Leisure, Perranzabuloe	1½	1⅞	
1160	Perran St. George (copper and tin)	21½	45	
2560	Garras (silver-lead), near Truro	5½	4½	4½
500	Tywarnhayle (cop.), Illogan & St. Agnes.	60	44	
3000	West Shepherd (silver-lead and copper)	2½	2	
2048	West Wheal Rose (lead), Newlyn	2½	3	
300	Wheal Arthur (lead), near East Wh. Rose	17	49	
100	Wheal Friendly (tin), St. Agnes	70	65	
4000	Wheal Golden (lead), Perranzabuloe	2	5 6	
216	Wheal Henry (copper), Kea, near Truro	25	8 12	
128	Wheal View, Perranzabuloe	3	5	
	GWENNAP DISTRICT.			
1056	Carrannall (copper), Gwennap	2⅝	5⅝	
128	Comfort (copper), Gwennap	65	70 75	
96	Great Consols (copper), Gwennap	1000	250	
252	Lanarth Consols (copper), Gwennap	10	11	10½
96	Treasvean (copper), Gwennap	10	225	
120	Trethellan (copper), Gwennap	5	18	21 22
120	Treviskey and Barvier (copper)	130	—	250 270
200	United Mines (copper), Gwennap	300	110	
120	West Trethellan (copper), Gwennap	15	20	
3795	West Wheal Jewel (tin and copper)	12	2	
512	Wheal Trefusis (copper), Gwennap	6⅝	19 19½ 20½	18 20
	REDRUTH DISTRICT.			
1024	East Buller (copper), near Redruth	2	7½	6½ 6⅝
128	East Carn Brea (copper), Redruth	4	3	
236	East Seton and Wheal Maude, Redruth	4	4½	
256	East Tolgus (copper), Redruth	4	19 20½ 21	
256	Grambler and St. Aubyn (copper)	80	50 53	50
1024	North Buller (copper), Redruth	4	14 15	
1200	North Wh. Buller, or Gt. South Tolgus	5	7	
256	North Trefusis (tin and copper), Redruth	1	2 3	
256	North Tolgus (copper), Redruth	7	20	14
256	South Tolgus (copper), Redruth	16	155 157½	152
5000	Treleigh Consols (copper), Redruth	6	2⅜ 3	
128	West Buller (copper), Redruth	10	850	

Shares.	REDRUTH DISTRICT.	*Paid.*	*Last Price.*	*Transactions.*
500	Wheal Daniell (copper), Chacewater	10	10	
182	Wheal Elizabeth (copper), Redruth	19	52½	
990	Wheal Mary (copper), Redruth	14½	7½	
128	Wheal Plenty (copper), Redruth	19	38 39	
126	Wheal Union (copper), Redruth	40	45 50	
512	Wheal Selena (copper), Redruth	1	1½	
1024	Wheal Uny (tin and copper)	2	5½	
	ILLOGAN DISTRICT.			
1000	Carn Brea (copper and tin), Illogan	15	120 125	
2560	Cook's Kitchen (copper and tin), Illogan	15½	9 10	
128	East Pool (tin and copper), Pool, Illogan	24½	160	170 175
94	East Wheal Crofty (copper), Illogan	125	150	
256	East Wheal Frances (copper), Illogan	2½	4	3½
6000	North Wheal Basset (copper and tin)	—	25	
100	North Pool (copper and tin), Pool	45	420	
—	Polgeare (copper and tin)	1	4 4½	
2000	South Carn Brea (copper), Illogan	10	—	
1100	South Dolcoath (copper), Illogan	6	6	
256	South Wheal Basset (copper), Illogan	10½	347½ 350	365
124	South Wheal Frances (copper), Illogan	75⅛	650	605
6000	Tincroft (copper and tin), near Pool	7	9 10½	9½ 10
940	West Tolgus (copper), Illogan	13⅜	6	
512	West Wheal Frances (copper), Illogan	7	24	25 26
800	West Wheal Towan (copper), Illogan	15	12½	
1000	Wheal Agar (copper), Illogan	6	5½ 5⅝	
	CAMBORNE DISTRICT.			
1000	Camborne Consols (copper), Camborne	7	7⅝	
256	Condurrow (copper and tin), Camborne	20	114	
1000	Copper Bottom (copper), Crowan	7	9	
256	Crane and Bejawsa (copper), Camborne	14	24	25
180	Dolcoath (copper and tin), Camborne	252	18 20	
1026	Gustavus Mines (copper), Camborne	6⅛	6½	5½ 5⅝
320	Nansegollan (tin and copper), Camborne	1	3	
140	North Roskear (copper), Camborne	10	160	
1026	Pendarves Consols (copper), Camborne	3½	6½	6½
1000	Pendarves and St. Aubyn (tin and copper)	5	6½ 7	
1000	Stray Park and Camborne Vean (copper)	15	21	18 19
1200	Tolcarne (tin and copper), Camborne	8	5	
200	West Seton (copper), Camborne	65	170	
2560	Wheal Harriet (copper), Camborne	1	1½	2½ 2⅝
198	Wheal Seton (tin and copper), Camborne	107	240	
267	Wheal Tryphena (tin and copper)	40	38	
	WEST CORNWALL DISTRICT.			
5120	Alfred Consols (copper), Hayle	3	14 15½ 16½	15 15½ 16½
1624	Balleswidden (tin), St. Just	9	10⅜	
940	Balnoon Consols (tin), Uny Lelant	—	4½ 6	
40	Bolowall and Nanpean (tin), St. Just	—	16	
128	Boscean (tin), St. Just	10	20	
60	Bosorn (tin), St. Just	5	6	
100	Botallack (tin and copper), St. Just	182	150	
1000	Carbona (tin and copper), Crowan	5	10	
1024	East Balleswidden (tin), Sancreed	1½	2	
256	East Godolphin (copper), Crowan	17½	13	
1000	East Wheal Reeth	⅜	1½	1½
1024	East Wheal Margaret (tin and copper)	⅛	1½ 1⅝	
2500	Georgia Consols (tin), St. Ive's	2½	7 7½	
1024	Great Wheal Alfred, St. Erth and Phillack	2	7	
512	Great Wheal Baddern (tin and silver-lead)	20	80 100	85
512	Hawke's Point (copper), Uny Lelant	7	5	5
256	Lelant Consols (tin), Uny Lelant	53	21½ 25	21
160	Levant (copper and tin), St. Just	—	170	170
1000	Lewis (tin and copper), St. Erth	17	18½	
1024	Mill Pool (tin and copper), St. Hilary	1	7	5½
2000	North Levant (tin and copper), St. Just	5	3	
512	North Wheal Vor (tin), Breage, Helston	—	5	
1024	Penzance Consols (tin), Sancreed	1½	2½ 3½	3 3½
1024	Praed Consols, Towednack	1	1	
560	Providence Mines (tin), Uny Lelant	20⅛	30	
1024	Sidney Godolphin (copper), Breage	2½	—	2⅝
300	South Speed (copper and tin), Uny Lelant	15	30	
1024	Spearne Consols (tin), St. Just	2½	10	
1024	St. Aubyn and Grylls (copper and tin)	2½	5½	
94	St. Ives Consols (tin), St. Ive's	80	80	
280	Spearne Moor (copper), St. Just	30	40	
1024	Trannack and Bosence, St. Erth	1	5½ 6½	5 5½ 6 7
1024	Trannack United Mines (tin and copper)	1½	4½	
600	Trelyon Consols (tin), St. Ive's	3½	6½	
100	Trumpet Consols (tin), near Helston	95	80 90	
1024	Wellington (copper & tin), Perranlithnoe	6½	15 15½ 15⅝	15⅝
1024	West Alfred Consols	5⅜	11	12 12½
1024	West Ding-Dong (tin)	⅜	⅜	2 2½
512	West Providence (tin), St. Erth	10	63 65 66	67½ 70
1024	West Wheal Treasury (copper), Gwinear	8	6½ 7	
1024	West Wheal Virgin (tin), Sancreed	1	1⅝	
256	Wheal Albert (copper)	10	28 29	
3072	Wheal Augusta (tin), St. Just	¼	2½	
120	Wheal Bal (tin), St. Just	10	14	
256	Wheal Carpenter (tin), Gwinear	1½	—	5 7½
268	Wheal Courtenay (copper)	20	23	
1000	Wheal Guskis (tin and copper), St. Hillary	⅛	3	1½
112	Wheal Margaret (tin), Uny Lelant	79	165	
1024	Wheal Neptune (copper), Perranuthnoe	1	2	
1080	Wheal Oak, near Helston	1½	1½	
120	Wheal Reeth (tin), Uny Lelant	41	170	175
256	Wheal Squire (copper), St. Erth	5	5	
1000	Wheal Susan, Breage and Crowan	1	2½	
1024	Wheal Tremayne (tin and cop.), Gwinear	9½	20½ 21	20½
1024	Wheal Trelusback, Stythians	5	5½ 6	
210	Wheal Prospect	4	7	
	WALES.			
1248	Ailt-y-Crib (silver-lead), Talybont	5	10	
1500	Bishopstone (silver-lead), Glamorganshire	2½	10	
8000	Blaenavon (iron)	50	12½	
10000	British Iron, New, regis. (iron)	12	8	
—	Ditto ditto, scrip	10	10	
2000	Bronfloyd (lead)	—	4	
2400	Bryn-Arian (lead), Cardiganshire	2	2½ 2⅝	
1000	Bryntail, Llanidloes, Montgomeryshire	2½	9	
2000	Bwich Consols (silver-lead), Cardiganshire	4	4½	
1000	Cae-Gynon (silver-lead), Cardiganshire	⅛	1½	
20000	Cameron's Steam Coal (coal), Swansea	10	2 2½	
200	Cefn Bruno (lead), Cardiganshire	6	55	
900	Court Grange (silver-lead), Cardiganshire	10	12	
1600	Craig-y-Mwyn (lead), Llanrhiadr, Mont	8½	10½	
1000	Cwm Daren	1	3	
1000	Cwm Erfin (lead), Cardiganshire	6	6 6½	
2000	Cwm Sebon	—	4	
128	Cwmystwith (lead), Cardiganshire	60	105	
1000	Daren (silver-lead), Cardiganshire	2	8½ 9 10	
3000	Dyfngwm (lead)	10	—	
150	East Daren (lead), Cardiganshire	17	65	
1280	Esgair Llee Llanfihangel-y-Croythin	4½	5 5½	
1024	Freidd Llwydd Mines (lead)	1½	3½	
1000	Gelli-rei-vin (silver-lead), Cardiganshire	1	5	
100	Goginan (lead), Cardiganshire	40	200	
100	Lisburne (lead), Cardiganshire	75	700	
1000	Llwynmalces (lead), Cardiganshire	9½	8 9	
3600	Llynvi Iron (iron)	50	50	
5000	Merlyn (lead), Flint	2½	4 4½ 5	4½ 4⅝ 5½
1024	Montgomery (lead and copper)	7	11½ 12	11⅜
200	Nanteos (lead), Cardiganshire	34	30	
3000	Nant-y-Car (copper), near Rhayader	—	5 5½	
4934	Pennant and Craigwen (lead)	3	3	
1000	Pen-y-bank and Erglodd (lead)	4	6⅜	
2500	Rhoswydol and Bacheiddon (lead)	10½	—	
10000	Rhymney Iron (iron), Rhymney	50	12	
10000	Ditto New	7	3	
2000	South Wales Mining Company (lead)	1	1	
4000	Tyn-y-Worglod (slate), near Carnarvon	4	4 5	
1000	Tyllwyd (lead), Cardiganshire	2	2½	
2048	West Goginan (silver-lead), Cardiganshire	1⅜	1½ 2	
1020	West Nantymwyn	—	2	
	IRELAND.			
1000	Dhurode (copper)		5	
4000	General Mining Co. for Ireland (copper)		5⅛	
10000	Hibernian (copper)		1⅜	
20000	Mining Co. of Ireland (copper, &c.)		4½	
5200	Wicklow (copper), Wicklow	5	19	
5000	Wicklow (copper and sulphur), Wicklow	3	3½ 3¾	
	SCOTLAND.			
5000	Black Craig (lead), Kirkcudbrightshire	5	5	
787	Kirkcudbrightshire (lead), Kirkcud.	8½	5	5
	MISCELLANEOUS.			
32	Black Burn, Alston, Cumberland	15	100	
32	Helvellin Mining Company, Westmoreland	10	20	
7100	Derwent (silver-lead), Durham	10	3	
1900	Keswick (lead), Portinscale, near Keswick	11	2 3	
5000	Low's Patent Copper Company	7	9	10
5000	Mendip Hills (lead), near Bristol	3⅝	1⅛	
512	Old Brimpts (tin), Lydford, near Ashburton	⅛	12	
1500	Tremault (lime quarries)	2½	3½ 4	
1024	Weston (lead), Cherbury, Shropshire	⅛	⅛	

	FOREIGN MINES.	*Paid.*	*Last Price.*
5000	Alten Mining Company (copper), Norway	14½	3
12000	Annotto Bay Mining Association (copper), Jamaica	1	5½ 6
20000	Australian (copper), South Australia	4	2½
6000	Barossa Range (copper), South Australia	1⅜	⅝
10000	Brazilian Imperial (gold), Brazil	23	5½ 6
12000	Cobre Copper Company (copper), Cuba	40	34⅜
10000	Copiapo Mining Company (copper), Chili	14	5⅝ 6½
20000	General Mining Association (iron & coal), Nova Scotia	20	14
5000	Kinzigthal Mining Association (silver), Germany	2	⅜
12000	Liguanea and General Mining Company of Jamaica	1	3⅝
5000	Linares (lead), Spain	3	2 2½
4500	Ditto New	3	3
20000	Mexican and South American (silver), Mexico	8	1 1½
5000	National Brazilian (gold), Brazil	3	2
104000	North British Australasian (copper), S. A. & New Zea.	1	¼
7000	Royal Santiago (copper), Cuba	10	7½ 8½
11000	St. John del Rey (gold), Brazil	15	13½
43174	United Mexican (silver), Mexico	Av. 28½	5½ 5⅝ 5⅝
10000	Worthing (copper), Adelaide, South Australia	3	2⅜ 2½

New Patents.

SPECIFICATION ENROLLED DURING THE PAST WEEK.

W. E. Newton, C.E., of Chancery-lane: For improvements in obtaining, preparing, and applying zinc, and other volatile metals, and the oxides thereof; and in the application of zinc, or ores containing the same, to the preparation or manufacture of certain metals, or alloys of metals.

Claims.—1. An improvement on what is known as the Belgian furnace, for reducing zinc. This improvement consists in the arrangement of the fire-place or places, and flue or flues, so that the products of combustion, after giving off their caloric to the retorts in the chamber, instead of passing off at the top, are reverberated by the closed arched roof, and carried downwards, and conducted away through openings situated at or near the bottom. Also, the use of the improved furnace described, formed by making the front and rear walls of the retort chamber, in which the retorts are heated, of hexagonal blocks, with central orifices to receive the ends of the retorts—and this whether for reducing zinc or other metals. By these arrangements, not only is the heat more equally diffused, but a much greater number of retorts may be employed.—2. The use of an oven, retort, or muffle, formed of fire-bricks, for reducing the ores of zinc to the state of an oxide, connected with a fire chamber at the side or end of the retort or oven, so that the products of combustion pass through the spaces surrounding the oven, in which the metallic fumes are oxidated by the admission of atmospheric air by suitable means.—3. Alloying iron or steel with volatilized zinc, whether obtained from metallic zinc or any of the ores thereof. This operation is similar to the conversion of iron into steel, and may be performed in the ordinary cementation furnace. Any of the native oxides of zinc, such as the red oxide and "Franklinite" (which latter, however, is more properly an ore of iron) may be employed, as may also the prepared oxides, provided they be free from arsenic, sulphur, or other substance or quality detrimental to iron and steel.—4. The employment of a bag or chamber with porous sides, or of an air-tight chamber, provided with a straining or porous bag adapted to its interior, in connection with a blowing or exhausting apparatus, by which the products of the distillation and oxygenation of zinc, and other volatile metals, may be separated from the accompanying air and gases,—which latter will be forced, or otherwise drawn, through the pores of the cloth, and conducted into the air; and the employment of the same apparatus for obtaining the blue or metallic powder of zinc, and the products of distillation of other volatile metals. Also the use of a condensing or collecting pipe, slightly elevated at the end, and provided with an aperture for the escape of the gases; or, otherwise, a horizontal collecting or condencing pipe, with a smaller ascending pipe at the further extremity, to aid in giving a slight draught to the escaping gases.—5. The fabrication and use of the pigments derived from the ores and oxides of zinc prepared as described, and the admixture of the grey oxide and blue metallic powder of zinc with the pulverised oxides and ores to produce an electro-magnetic effect when applied to metallic surfaces, to protect them from oxidation. The sulphuret, carbonate, and red oxide of zinc, and Franklinite, are the substances here alluded to. Both these latter contain certain portions of oxide of iron and of manganese, but the Franklinite to the greatest extent. When roasted and pulverised, the red oxide produces a rich dark brown, and the Franklinite, with a slight admixture of lamp-black, a very good black.—6. The application of Franklinite to the improvements of iron during the process of reduction, and in the finery and puddling of crude and pig-iron, according to the methods described; and also the application of a receiver or collecting chamber, in conjunction with an intermediate flue, or a chamber or chambers, or apparatus of the kind described, to prevent the escape of the fumes and vapours of zinc produced during such process.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

S. Allen, junior, of Birmingham, manufacturer, for certain improvements in the manufacture of buttons.

N. J. Amies, of Manchester, manufacturer, for certain improvements in the manufacture of braid, and in the machinery or apparatus connected therewith.

A. V. Newton, of Chancery-lane, mechanical draughtsman, for improvements in communicating intelligence by electricity.

A. Alliott, of Lenton Works, Nottingham, engineer, for improvements in cleaning, dyeing, and drying machines, and in machinery to be used in sugar, soap, metal and colour manufacturing.

B. L. Shaw, of Huddersfield, for improvements in cleaning and preparing wool and other fibrous or textile materials, and in the manufacture of coloured yarns of wool and other fibres, and in weaving.

A. M. Perkins, of Frances street, Regent-square, Middlesex, engineer, for improvements in railway axles and boxes.

C. de Bergue, of Arthur-street West, London, engineer, for improvements in and in the construction of the permanent way of railways.

F. R. Robinson, of Bolton, Massachusetts, United States of North America, for a new and useful sewing machine.

W. Onions, of Southwark, Surrey, engineer, for improvements in the manufacture of certain parts of machinery used in spinning; also for certain improvements in the manufacture of steel.

F. M. A. Dumant, of Paris, engineer, for improved means and electric apparatus for transmitting intelligence.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

B. Goodfellow, Hyde, fire-box and flue for cylindrical and other boilers.
H. Dyer, Hungerford, office index and memento.
J. E. Dalphin, Whitecross-street, self-adjusting churn.
H. Wickens, Regent-street, border piece or edging for a parasol.
Pease and Gardner, Bradford, pressure gauge.
W. Levesley, Park-terrace, Old Ford, guard razor.
J. C. Stokes, Birmingham, tap. [steam-engines.
J. Illingworth and Sons, Shipley, adjustable eccentric tumbler for the slide valve of Negretti and Zambra, Hatton-garden, metallic scale thermometer.
J. Gouger, Wood-street, Cheapside, fastener for a shirt-collar, "The Imperial."
G. P. Tye, Birmingham, spring lable for tree and flower pots.
F. J. Brewer, Birmingham, window.
B. Ridge, Putney, invalid bed carriage.
A. Bessan, Friday-street, coffee-pot.
J. Higgins, Salford, roving or slubbing frame spindle.
A. Kenrick and Sons, West Bromwich, door chain and case.
J. Groves, Wolverhampton, day indicator.—*Mechanics' Magazine.*

RAILWAY TRAFFIC.—The gross traffic since the 1st January, on 6254 miles, amounts to 1,090,823*l.*, which gives an average of 174*l.* 8s. 4¾d. per mile for the period mentioned. The corresponding period of last year, on 5485 miles, produced 939,985*l.*, being equal to 171*l.* 7s. 5¾d. per mile for the same number of weeks. The gross traffic for the week just ended, on 6254 miles, is returned at 227,406*l.* 9s. 7d., which is equal to 36*l.* 7s. 2¾d. per mile. The corresponding week of last year, on 5513 miles, produced 199,195*l.*, or an average of 36*l.* 2s. 7¾d. per mile.—*Railway Times.*

ACCIDENTS.

Stoke-upon-Trent.—A correspondent writes—"Six miles from hence a coal mine is on fire, and the conflagration still rages. An explosion occurred *during the night*, and, of course, in the absence of the miners. The phenomenon is incomprehensible; of course, as it happened unaccountably during the night, no one has been injured. It occurred on Monday night."

Herodsfoot.—As D. Harriss was ascending the ladders, a stone from the kibble fell on his head, fractured his skull, and knocked him off; he fell 10 fathoms down the shaft, and died in two hours.

Bolton.—Thomas Chadwick was killed by a piece of iron falling down the shaft and fracturing his skull, in the Top-o'-th'-Lodge pit.

Bilston.—Joseph Harper fell into the sump and was drowned, through the attempt to go up the shaft by hanging on the water-barrel, at Messrs. White and Lester's colliery.

Willenhall.—A tremendous explosion of fire-damp took place at the coal pit of Messrs. Thompson and Co., through the air-doors being left open the previous evening. There was, fortunately, only one man in the pit at the time, and he was severely burned.

West Bromwich—Supposed Murder by Cutting a Rope.—A dreadful affair has occ